Graduate

PROGRAMS AND COURSES

of Instruction

2015–2016

Brooklyn College

CUNY The City University of New York

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DISCLAIMER

The 2015–16 Graduate Bulletin represents the academic policies, services, and course and program offerings of Brooklyn College that are in effect through August 2016. The most current information regarding academic programs and course descriptions, academic policies and services available to students can be found on the Brooklyn College website.

For matters of academic policy (e.g., applicable degree requirements), students are also advised to consult the Center for Academic Advisement and Student Success, the Office of the Associate Provost for Academic Programs, their major department adviser and/or the registrar for additional information.

For policies and procedures related to administrative and financial matters (e.g., tuition and fees), students are advised to consult with the Enrollment Services Center.

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 are similarly subject to change by the Board of Trustees of The City University of New York. The City University regrets any inconvenience this may cause. Students are advised to consult regularly with college and department counselors concerning their programs of study.

Accounting

Department office: 202 Whitehead Hall
Phone: 718.951.5152

Full-time Faculty

Professors: Grayson, Kass-Shraibman
Associate Professors: Testa, Widman, Zelcer
Assistant Professors: Crossman, Fischer, Gerstein, Lachman, Vlady, Williams
Lecturers: Langer, Lefkowitz, Sauber

M.S. degree program in accounting (C.P.A. qualifying)
HEGIS code 0502; SED program code 88398

The master of science in accounting program is registered with the New York State Education Department as meeting the 150 semester-hour requirement for CPA candidates. Students who complete the program will be permitted to sit for the CPA examination. Course work emphasizes asset valuation and related problems of enterprise reporting, tax research and planning, comptrollership and managerial accounting, contemporary accounting topics, and accounting requirements of the Securities and Exchange Commission (SEC). This program requires extensive preparation in the areas of professional accounting and general business. Applicants who have completed the bachelor of science degree in accounting (public accounting) at Brooklyn College satisfy the undergraduate education requirements of this program. All other applicants must present coursework equivalent to the requirements for the B.S. in public accounting at Brooklyn College.

Degree requirements

Thirty credits are required for the degree.

Students must complete the following courses:

Accounting:
All of the following: Accounting 7106X, 7107X, 7108X, and 7109X.
Two of the following: Accounting 7110X, 7120X, 7130X, 7140X, 7150X, 7190X.

Economic analysis:
One of the following: Economics 7000X, Economics 7205X or Business 7205X, or Business 7206X, or Economics 7010X. Students who have not taken Economics 7025X or a comparable undergraduate mathematics course are advised to take Economics 7205X or Business 7205X or Business 7206X.

Finance:
Economics 7215X or [Business 7215X] or Finance 7215X or [Business 7240X] or Finance 7240X or [Business 7216X] or Finance 7216X.

Quantitative methods:
Economics 7230X or Business 7230X.

Business Electives/Econometrics:
One course from the following: Accounting 7110X, 7120X, 7130X, 7140X, 7150X, 7190X; Business 7200X, 7202X, 7204X, 7208X, 7216X, 7220X, 7240X, 7250X, 7255X, 7260X; Business 7131X or Accounting 7131X; Economics 7020X, 7021X.

With permission of the graduate deputy chairperson, up to 12 graduate credits may be accepted for work done at other institutions.

M.S. degree program in business administration
HEGIS code 0517; SED program code 01895

Please note that Option 5 is contingent on NYSED approval and will not accept applications for admission prior to a Spring 2016 entry date.

A business administration degree can provide students with a variety of career paths ranging from public policy to international finance to banking. The Accounting, Business Management, Finance, and Economics Departments offer a 33-credit master of science degree in business administration with five options for specialization: economic analysis, global business, accounting, general business, business intelligence and data analysis.

Option one is more flexible and allows students to explore different areas of economics including health economics, public finance and public policy, and international trade.
Option two is more focused and is expressly for students with an interest in global business. It includes courses in global finance and management,

international economics and finance, bargaining and conflict resolution, global business environment, and international human resource management.
Option three is for students with an interest in accounting. An undergraduate degree in accounting is not required. However, this option is only open to students who have taken Accounting 2001, 3001, 3011, 3021, and 3101(introductory accounting, managerial accounting, financial accounting, and income taxation) or the equivalent.
Option four is a more flexible major for those interested in general business. It is of interest to those who may have had previous undergraduate or graduate coursework in business and want to obtain a general business degree and also to those who never previously had such coursework and want to obtain a business degree. It can be customized by the student to the student's interest in a broad range of business topics.
Option five is for students interested in a career in applied statistical analysis or business analytics

All applicants must have undergraduate courses in macroeconomics, microeconomics, statistics, and calculus.

Degree requirements

A minimum of thirty-three credits is required for the degree. Students must complete at least 24 credits in the Business Management, Accounting, Finance, and Economics Departments.

The following courses are required: Economics 7000X, 7010X, 7020X, 7021X, 7025X. Option 1 students who have taken Mathematics 2101 or equivalent may, with permission of the graduate deputy, waive Economics 7025X, and substitute an appropriate course in Economics or another department. Option 1 students who have taken Mathematics 2501 or Mathematics 3501 or equivalent may, with permission of the graduate deputy, waive Economics 7020X, and substitute an appropriate course in Economics or another department. Students selecting Option 2 or Option 3 (below) may take either Economics 7000X or Business 7206X. They also take either Economics 7020X or Business 7276X; Economics 7021X or Business 7279X; Economics 7010X or Economics 7215X or [Business 7215X] or Finance 7215X; and either Economics 7025X or Business 7278X. Option 3 students who have taken an undergraduate course in calculus may, with the permission of the graduate deputy, waive Economics 7025X and substitute a course from the Option 3 requirements listed below. With permission of the graduate deputy chairperson, up to nine credits may be taken in appropriate courses in other departments. With permission of the graduate deputy chairperson, up to 12 credits may be accepted for work done at other institutions. Option 4 students with permission of the graduate deputy may substitute any or all courses from the graduate core of Economics 7000X or Business 7206X, Economics 7010X or Economics 7215X or Finance 7215X or [Business 7215X], Economics 7020X, Economics 7021X or Business 7279X, Economics 7025X or Business 7278X with any Business course. This will typically be allowed for those with previous undergraduate or graduate coursework in these course topics. Option five students take the courses described below.

Students select one of the following options to complete the remaining credits:

Option 1: Economic Analysis

A minimum of 18 credits (6 courses) from the following: Economics 7215X or Finance 7215X or [Business 7215X], Economics 7027X, Economics 7028X, Economics 7030X, Economics 7040X, Economics 7045X, Economics 7050X, Economics 7055X, Economics 7060X or Health and Nutrition Sciences 7144X, Economics 7090X and Economics 7095G. With the permission of the graduate deputy chairperson, students may be allowed to take up to 6 credits of other courses to complete the 18 credit requirement in Option 1.

Option 2: Global Business

A minimum of 18 credits (6 courses) from the following: Business 7131X, Business 7200X, Business 7202X, Business 7204X, Business 7208X, Business 7210X, Business 7212X, [Business 7216X] or Finance 7216X, Business 7220X,, [Business 7240] or Finance 7240X, Business 7250X or Psychology 7246G, Business 7255X or Psychology 7247G, Business 7257X, 7260X, 7265X, 7278X, 7279X, 7290X, 7203X or Television and Radio 7727X, Economics 7215X or [Business 7215X] or Finance 7215X, Economics or Business 7230X, Economics 7027X, Economics 7028X, Economics 7030X, Economics 7060X or Health and Nutrition Sciences 7144X, and Economics 7095G. With the permission of the graduate deputy chairperson, students may be allowed to take up to 6 credits of other courses to complete the 18 credit requirement in Option 2.

Option 3. Accounting

A minimum of 18 credits (6 courses) from the following: Accounting 7108X, Accounting 7109X, and at least two additional courses with an Accounting prefix; Business 7131X or Accounting 7131X; [Business 7215X] or Finance 7215X or Economics 7215X, [Business 7216X] or Finance 7216X, Business 7230X, [Business 7240X] or Finance 7240X, Business 7260X, and Business 7290X. With the permission of the graduate deputy chairperson, students may be allowed to take up to 6 credits of other courses to complete the 18 credit requirement in Option 3.

Option 4. General Business.

A total of 33 credits with a minimum of 18 credits (6 courses) from any Business graduate course. As noted above, the 5 graduate program core classes may be substituted by additional Business courses with permission of the graduate deputy.

Option 5. Business Intelligence and Data Analysis

A total of 33 credits. The required courses for this option are: Economics 7000X or Business 7206X; Economics 7010X or Economics 7215X or Finance 7215X; Economics 7025X for students who have not taken at least one year of calculus; Business 7276X, Business 7278X, Business 7279X or Business 7290X, Business 7230X or Economics 7230X, Economics 7020X, and Economics 7021X.
With the permission of the graduate deputy chairperson, students will be advised which additional courses to take to complete the 33 credits.

CUNY Ph.D.

The City University of New York offers a doctoral program in business with a specialization in accounting. General information about CUNY Ph.D. programs is in the chapter "About Brooklyn College" of the Graduate Bulletin.

Accounting Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Accounting Department and the executive officer of the doctoral program.

Courses

ACCT 7101X Financial and Managerial Accounting

45 hours plus conference; 3 credits
Intensive study of accounting principles and managerial applications to introduce students specializing in fields other than accounting to basic analytic tools of corporate financial reporting and firm decision making. (Not open to students who have completed more than 6 credits in accounting courses. Not open to students who have completed Economics 701X.)

ACCT 7106X Advanced Accounting Theory

30 hours plus conference; 3 credits
Asset valuation and related problems of enterprise reporting. Financial accounting issues for complex business entities from both a conceptual and technical view. (Not open to students who have completed Economics 706X.)

Prerequisite: admission to the accounting specialization or permission of the chairperson or the chairperson's designee.

ACCT 7107X Federal Taxation: Planning, Current Developments, and Advanced Problems

30 hours plus conference; 3 credits
Methodology used in tax research and planning. Ethical and policy considerations in tax planning and tax decisions. Capital gains, reorganization, estate planning, exempt organizations, pensions, special purpose entities. (Not open to students who have completed Economics 707X.)

Prerequisite: admission to the accounting specialization or permission of the chairperson or the chairperson's designee.

ACCT 7108X Auditing Concepts, Standards, and Procedures

30 hours plus conference; 3 credits
Examination of theory and philosophy underlying verification of financial data. Changing standards and new levels of legal and moral responsibility. Role of control and supervisory agencies. Application of statistical methodology to the audit function. (Not open to students who have completed Economics 708X.)

Prerequisite: admission to the accounting specialization or permission of the chairperson or the chairperson's designee.

ACCT 7109X Financial Statement Analysis

30 hours plus conference; 3 credits
Analysis and interpretation of financial statements primarily by external decision makers. Fundamental analysis techniques in equity (share) evaluation decisions. Credit assessment and debt valuation decisions. Measures of liquidity, solvency, capital structure, return on investments, and operating performance. Impact of accounting conventions and alternative standards on analytical measures.

Prerequisite: two undergraduate courses in intermediate accounting or permission of the chairperson or the chairperson's designee.

ACCT 7110X Accounting Requirements of the Securities and Exchange Commission and Other Regulatory Agencies

30 hours plus conference; 3 credits
Accounting principles and auditing requirements of the Securities and Exchange Commission and other selected government agencies. Applicable statutes, regulations, court decisions. (Not open to students who have completed Economics 703X.)

Prerequisite: admission to the accounting specialization or permission of the chairperson or the chairperson's designee.

ACCT 7120X Comptrollership and Managerial Accounting

30 hours plus conference; 3 credits
Role, functions, and responsibilities of the corporate comptroller and treasurer. Relevant modern planning and control techniques and their underlying conceptual philosophy. Design, installation, and implementation of management information systems for planning operations, reporting performance, and administering the firm. Decision-making models, profit planning, and performance analysis. (Not open to students who have completed Economics 704X.)

Prerequisite: admission to the accounting specialization or permission of the chairperson or the chairperson's designee.

ACCT 7130X The Legal Environment of Business

30 hours plus conference; 3 credits
Survey of private substantive rights; government regulatory agencies as they relate to business activities; comprehensive examination of regulations concerned with the protection of consumers, investors, employees, and the preservation of the environment and competition. (Not open to students who have completed Economics 752X.)

Prerequisite: admission to the accounting specialization or permission of the chairperson or the chairperson's designee.

ACCT 7131X Tax Regulation & Strategy

45 hours; 3 credits
The practical application of accounting and government regulations regarding the taxation of individuals and entities. Legal aspects of operating a business, regulation, and corporate social responsibility. The federal tax process, procedures, accounting, and planning are

explored. This course is the same as Business 7131X.

Prerequisite: At least 9 credits of undergraduate courses in accounting.

ACCT 7140X Contemporary Accounting Topics

30 hours plus conference; 3 credits
Current problems in financial and managerial accounting and the accounting profession. (Not open to students who have completed Economics 714X.)

Prerequisite: admission to the accounting specialization or permission of the chairperson or the chairperson's designee.

ACCT 7150X International Accounting

30 hours plus conference; 3 credits
Analytical approach in examining major international dimensions of financial and managerial accounting. National and cultural influences on accounting and the accounting profession. Financial regulations, international accounting standards, and transparency in financial reporting. Case studies.

Prerequisite: two undergraduate courses in intermediate accounting or permission of the chairperson or the chairperson's designee.

ACCT 7190X Special Topics

30 hours plus conference; 3 credits
Topics vary from term to term. Students may take this course two times, but may not repeat topics.

Prerequisite: permission of the chairperson or his designee.

ACCT 7191G Independent Reading

Minimum of 135 hours of independent work and conference; 3 credits
Independent research for students concentrating in accounting. Supervised by a faculty member. This course may be used as a stage in the preparation of a master's thesis. One or more written reports and/or final examination. (Not open to students who have completed Economics 7091G [782G].)

Prerequisite: Accounting 7106X [706X], 7107X [707X], and 7108X [708X]; and permission of the chairperson or the chairperson's designee.

ACCT 7195G Thesis Research

Hours to be arranged; 3 credits
Thesis research for students concentrating in accounting. Supervised by a faculty member. Students register for this course only once. (Not open to students who have completed Economics 7095G [783G].)

Prerequisite: grades of B or better in all of the following: Accounting 7106X [706X], 7107X [707X], and 7108X [708X]; and permission of the chairperson or the chairperson's designee.

Africana Studies

Department office: 3105 James Hall
Phone: 718.951.5597

Full-time Faculty

Professors: Cunningham, Day
Assistant Professors: Byam, Cumberbatch

Offering a multidisciplinary perspective on the study of people of African descent in Africa, the Caribbean, and the United States, the department offers courses focusing on the histories, cultures, politics, and societies of Africa and its diaspora. The department offers courses that augment other graduate majors.

The department offers study-abroad opportunities which provides an in-depth experience in a selected country of the African diaspora in cooperation with a host institution in that country. Summer seminars have taken place in Barbados, Brazil, Cuba, Ghana, Haiti, Jamaica,Panama, and Trinidad.

Courses

AFST 7010X Black Research Methodology

45 hours; 3 credits
An introduction to methodology used to conduct empirical research in the Black community. The course will include an introduction to the theory of individual and organizational behavior; historical, experimental, and descriptive research methods; introduction to computer usage in conducting research; and discussions of issues relevant to research in the Black community.

AFST 7020X Black Community Organizations and Participation

45 hours; 3 credits
Study, analysis, and evaluation of the techniques and forms of Black community expression and participation in the inner city. Policy enactment to deal with the problems of the Black community. Case studies reviewed.

Prerequisite: 6 credits of advanced courses in the social sciences, or permission of the chairperson.

AFST 7030X The Political Economy of the Caribbean

45 hours; 3 credits
An analysis of the political economy of the states in the Caribbean, including Haiti, the Dominican Republic, Cuba, the French and Commonwealth Caribbean. The stated objectives of various development strategies advanced since the 1950s; the relationship between state systems, public policy output, and a response of the various structures/individuals within those systems.

AFST 7040X Summer Seminar in Africa, the Caribbean, South America, or the United States

90 hours; 6 credits
Lectures, research, and study in selected historical, political, economic, and social aspects of life in a selected country or in a region of the United States. Lectures by Brooklyn College and host country scholars, in cooperation with a university in Africa, the Caribbean, South America, or the United States may be supplemented by fieldwork, and library and empirical research. This course may not be taken more than once.

Prerequisite: completion of 6 graduate credits in the social sciences or the humanities; or permission of the chairperson.

AFST 7050X Social Change in Africa, 1750-1945

30 hours plus conference; 3 credits
Introduction to social change in sub-Saharan Africa from the era of the slave trade to the end of World War II. Emphasis on internal transformations sparked by industrialization, imperial expansion and colonization, including political innovations, changing market relations as well as transformations in kinship and gender relations. In depth coverage of slavery, women in the economy, the development of an African working class, religious transformations, the emergence of new elites, the growth of modern political activism, and resistance to colonization. This course is the same as History 7580X [754.1X].

AFST 7060X Modern South Africa

30 hours plus conference; 3 credits
Analysis of major political, economic, and social developments in the Republic of South Africa since 1948. Against the backdrop of South Africa's recent history, topics examined include: the system of apartheid, White rule and Black challenge, the South African economy, South Africa and the wider world, the Nelson Mandela era, and U.S. South African interests and policies. This course is the same as Political Science 780X.

AFST 7070X Independent Research and Study

30 hours plus conference; 3 credits
Investigation of a selected topic in Africana Studies developed by the student and a faculty advisor. Will include a set of readings, a substantial written assignment, and regular meetings. Hours to be arranged.

Prerequisite: Permission of major advisor and Africana department chairperson.

Anthropology and Archaeology

Department office: 3307 James Hall
Phone: 718.951.5507

Full-time Faculty

Professors: Bankoff, Perdikaris, Rosenberger
Visiting Professor: Diaz Barriga
Associate Professors: Antoniello, Cavanaugh
Assistant Professors: Chester, Hejtmanek, Schiller

In addition to coursework using the four-field approach, which includes cultural anthropology, archaeology, physical anthropology, and linguistics, the Department of Anthropology and Archaeology offers ongoing opportunities for hands-on research in laboratory and fieldwork studies led by full-time faculty members. A doctorate in anthropology is offered by the City University of New York at the Graduate School and University Center. The following courses are offered as electives for students in other fields.

Courses

ANTH 7010X Special Topics in Anthropology

45 hours; 3 credits
Subjects of interest in any of the four fields of anthropology that are not treated systematically in the regular curriculum. Topics vary from term to term. Students may take this course twice but may not repeat topics.

Prerequisite: nine credits in advanced social science from an undergraduate program or permission of the chairperson.

ANTH 7011X Special Topics in Peoples and Cultures of Selected Areas

45 hours; 3 credits
Study of culture groups or areas, not usually encountered in the departmental offerings; institutions, historical and environmental influences, and/or effects of outside contact on specific ethnographic, or archaeological cultures. Physical, ethnographic, and theoretical analyses of culture groups. Cultural adaptations and retentions. Contemporary issues and problems. Students may take this course twice but may not repeat topics.

Prerequisite: permission of the chairperson based upon the topic to be offered.

ANTH 7440X Seminar in Zooarchaeology

30 hours lecture, 30 hours laboratory; 3 credits
Study of animal remains from archaeological sites; methods of recovery, identification, and analysis. Special emphasis placed on natural and social environments, formation processes, subsistence strategies, and paleoenvironments.

Prerequisite: completion of the core courses in biology, anthropology, and archaeology in the Ph.D. program at the City University of New York Graduate Center, or permission of the chairperson.

ANTH 7470X Summer Archaeological Field School

15 hours plus 150 hours supervised fieldwork; 6 credits
Intensive instruction in field methods and techniques of archaeology through participation in every aspect of an excavation; training in archaeological mapping, excavation techniques, and methods of archaeological laboratory analysis. For Summer Archaeological Field School abroad, room and board fees and travel expenses are additional.

Prerequisite: permission of the chairperson.

ANTH 7510X North American Indians

45 hours lecture; 3 credits
Patterns of American Indian cultures north of Mexico; cultural and linguistic diversity, cultural adaptations and developments; contemporary Native Americans.

Prerequisite: credits in advanced social science in an undergraduate program or permission of the chairperson.

Art

Department office: 5306 Boylan Hall
Phone: 718.951.5181

Full-time Faculty

Presidential Professor: Rand
Distinguished Lecturer: Acconci
Professors: Carlile, Conelli, Cronin, Hadler, Kiel, Kousser, Mallory, McCoy
Associate Professors: Ball, Comerford
Assistant Professors: Cloud, Kilroy-Ewbank, Richards, Schwab
Lecturer: Simon

The Art Department, at the center of the art world, draws on New York's vast community of notable artists and art historians for its faculty and for the many visiting artists and lecturers who supplement the curriculum. Students have easy access to the city's great museums and countless galleries. The department offers an M.F.A. in studio art, an M.A. in art history, an Advanced Certificate in museum education, and a concentration for education majors. An internationally recognized studio faculty, many represented in important museums and by commercial galleries in the U.S. and abroad, teach drawing, painting, sculpture, printmaking, photography, digital art, and combined media. A faculty of distinguished scholars offers art history courses ranging from ancient to modern, both western and non-western. The studio program, with a fine-arts rather than a commercial focus, seeks a balance between traditional and new in its mix of faculty, students, and course content. A large percentage of its graduates are successful artists, many represented by commercial galleries. Others have become commercial artists, illustrators, graphic designers, architects, cartoonists, art directors, art restorers, and fashion designers. A number have won such major honors as Guggenheims, Fulbrights, Pollack-Krasners, and the Prix de Rome. Art history graduates have become museum curators, gallery directors, art critics, art writers, art editors, and archivists, or work for public or private art-related organizations. Graduates of both programs teach in leading art schools and universities.

M.A. degree program in art history
HEGIS code 1003; SED program code 02017

Students choose as an area of concentration one of the subject areas or other specializations within art history.

Matriculation requirements

Applicants must offer a distribution of advanced art history courses in different subject areas or specializations within art history acceptable to the Art Department.

The Art Department may require an interview.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Thirty credits are required for the degree.

Students must complete Art 7190G.

Students must also complete 27 additional credits in art history courses. Up to six of these credits may be taken outside the Art Department with permission of the deputy chairperson for graduate art history.

During the first two years, a minimum of one course each term is required unless waived by the deputy chairperson for graduate art history.

Within the first year, students must pass an introductory examination to determine their general knowledge of art history.

Students must submit a thesis of publishable quality acceptable to the Art Department. Information about requirements for the thesis is in the section "Academic Regulations and Procedures" of the Graduate Bulletin.

Students must pass a reading examination in French, German, Italian, or Spanish.

Courses in the Art Department offered toward the degree must be 7000-level courses.

The program of study must be approved by the deputy chairperson for graduate art history.

Recommendations

Students are encouraged to audit courses in related fields in other departments.

To gain experience in college-level teaching, students may work with the instructor of an undergraduate course in their area of concentration; collaboration is encouraged in preparing lectures, making up exams, and reading papers.

M.F.A. degree program in art
HEGIS code 1002; SED program code 02016

Students choose as an area of concentration one of the following subject areas: Drawing and painting, sculpture, printmaking, photography, or digital art. They also take courses in other areas of concentration and in art history. Periodically, their work is formally reviewed by the full studio faculty who also visit their studios individually for informal critiques.

Matriculation requirements

Applicants must offer at least 36 credits in studio art and art history courses including a well-balanced distribution of credits in two-dimensional and three-dimensional art acceptable to the Art Department.

Applicants must submit directly to the Art Department a selection of work emphasizing their intended area of concentration before February 1 for Fall admission. The work should be submitted through the program's Web site, http://artmfa.brooklyn.cuny.edu, following the instructions on the Web site.

Applicants must also submit a completed application to the Brooklyn College Division of Graduate Studies. General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Forty-eight credits are required for the degree.

Students must complete Art 7210X, 7220X, 7910X, 7920X, 7940G, 7950G, and 7951G. Art 7940G, 7950G, and 7951G must be taken in sequence, usually beginning in the first semester of matriculation.

Students must also complete 18 additional credits in studio art courses, internship, independent study electives, or other electives outside the department.

Students must also complete nine additional credits in art history courses. Art 7198G may be repeated for credit.

Independent creative work developed in Art 7940G, 7950G, and 7951G must culminate in a final exhibition with accompanying artist's statement about the work.

Courses in the Art Department offered toward the degree must be 7000-level courses.

The program of study must be approved by the deputy chairperson for graduate studio art.

Charles G. Shaw Awards

For distinction in painting, the Art Department grants awards each term to a number of graduate students matriculated in the M.F.A. program.

Advanced certificate in museum education
HEGIS code 0899; SED program code 36517

Matriculation Requirements

Matriculation in the Masters in Art History program (30 credits)

Degree Requirements

Twelve credits are required for the certificate in addition to the thirty credits required for the M.A. in Art History.

Students must complete Art 7184G and 7185G.
Students must also complete two 60-hour internships, Art 7193G and 7194G.

Students will begin the program with art history courses. They must complete Art 7184G before the internships. The internships can either be completed during the summer or during the fall or spring semesters along with their regular coursework in art history. Students should complete Art 7185G in the second year. The master's thesis may consist of a strictly art historical subject or may include some research into museum education.

CUNY Ph.D.

The City University of New York offers a doctoral program in art history. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School" of the Graduate Bulletin. The Art Department offers courses at Brooklyn College in art history that are creditable toward the CUNY doctoral degree with permission of the executive officer of the doctoral program.
For information about the courses, students should consult the deputy chairperson for graduate art history of the Art Department and the executive officer of the doctoral program.

Courses

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

ART HISTORY

Ancient and medieval art

ARTD 7003G Topics in Egyptian and Near Eastern Art

30 hours plus conference; 3 credits
Specific topics are announced one year in advance. Students may take this course twice but may not repeat topics. (Not open to students who have completed the same topic in Art 706.1G.)

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7007G The Classical Period in Greek Art

30 hours plus conference; 3 credits
Architecture, sculpture, and painting of the Greek world in the fifth and fourth centuries B.C.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7011G Roman Imperial State Art

30 hours plus conference; 3 credits
Treatment of the human figure and ornament in manuscripts of the seventh and eighth centuries. Style of manuscripts, metalwork, and ivories of Carolingian courts and schools.

Prerequisite: Matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7015G Byzantine Art : From the Catacombs to Iconoclasm

30 hours plus conference; 3 credits
Catacomb art in fresco and sarcophagi. Church-building activities from Constantine to Justinian. Earliest Bible cycles in manuscript and mosaic. growing popularity of icons. Art of the imperial capital of Constantinople.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7019G Medieval Art to the Time of Charlemagne

30 hours plus conference; 3 credits
Treatment of the human figure and ornament in manuscripts of the seventh and eighth centuries. Style of manuscripts, metalwork, and ivories of Carolingian courts and schools.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7023G Romanesque Art

30 hours plus conference; 3 credits
Sculpture and architecture of the West from about 1050 to 1200.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7026G Gothic Art in Europe

30 hours plus conference; 3 credits
Major twelfth-century and thirteenth-century monuments of architecture, sculpture, painting, metalwork.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art, or permission of the deputy chairperson.

Early modern European art

ARTD 7033G Renaissance Painting in Florence and Vicinity during the Fifteenth Century

30 hours plus conference; 3 credits
Formation and development of the early Renaissance style in Florentine painting of the fifteenth century.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7036G The High Renaissance and Its Aftermath in Florence and Rome

30 hours plus conference; 3 credits
Inception, fruition, and disintegration of the High Renaissance style in painting and sculpture of central Italy.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7039G Problems in Late Gothic and Renaissance Art and Architecture

30 hours plus conference; 3 credits
Seminar or colloquium. Students may take this course four times but

may not repeat topics. (Not open to students who have completed the same topic in Art 762.1G, 762.2G, 762.3G.)

Prerequisite: a course chosen from Art 7030G [753G] through 761G in late Gothic or Renaissance art appropriate to the problem of the term or permission of the deputy chairperson.

ARTD 7043G Baroque Art in Italy

30 hours plus conference; 3 credits
Origins and development of the Baroque style in painting and sculpture in seventeenth-century Italy.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7051G Topics in Baroque Art and Architecture

30 hours plus conference; 3 credits
Specific topics are announced one year in advance. Students may take this course twice but may not repeat topics. (Not open to students who have completed the same topic in Art 772.1G.)

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7056G Latin American Art, 1492 to the present

45 hours, 3 credits
Examination of art and architecture of Latin America from the Conquest to the contemporary moment.

Prerequisite: Matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

Modern European and American art

ARTD 7061G Neoclassicism and Romanticism

30 hours plus conference; 3 credits
Sources and evolution of European Neoclassic and Romantic painting and sculpture from 1750 to 1850.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7064G Impressionism and Postimpressionism

30 hours plus conference; 3 credits
Origins and development of Impressionism, Postimpressionism, and Neoimpressionism in European painting from 1850 to 1900.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7068G European Art since 1900

30 hours plus conference; 3 credits
Major trends in European painting and sculpture in the first half of the twentieth century.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7072G American Art from World War II to the Present

30 hours plus conference; 3 credits
Major contemporary painters and sculptors seen in relation to broader trends and developments. Emphasis on the New York school.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7082G Topics in Modern European and American Art and Architecture

30 hours plus conference; 3 credits
Specific topics are announced one year in advance. Students may take this course four times but may not repeat topics. (Not open to students who have completed the same topic in Art 796.1G, 796.2G, or 796.3G.)

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7086G History of Photography

30 hours plus conference; 3 credits
Seminar or colloquium. Technical and aesthetic history of photography. Its relation to other arts.

Prerequisite: permission of the deputy chairperson.

ARTD 7091G Women in Art

30 hours plus conference; 3 credits
Exploration of the changing image and role of women in art from the Renaissance to the present. Major artists including Gentileschi, Delaunay, Modersohn-Becker, Kahlo, O'Keefe, and Sherman will be studied. Issues of gender, race, and contemporary feminist theory will be discussed

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7097G Architecture and Urban Design in New York City

45 lecture hours; 3 credits
Study of New York City's monuments and infrastructure. Contextualization of the city's built environment within its architectural discourse.

Prerequisite: None

Asian, African, and Oceanic art, and indigenous art of the Americas

ARTD 7100G Approaching "Non-Western" Art

45 hours; 3 credits
Examines the arts of selected cultures that developed outside the spheres of influence of major European civilizations. Investigates how European imperialism and colonization has affected the understanding and interpretation of cultures.

Prerequisite: matriculation for the M.A. in art history.

ARTD 7135G Foundations of Islamic Art

30 hours plus conference; 3 credits
Exploration of the foundations of Islamic art beginning with the Middle East in the seventh century, following the spread of these artistic developments through North Africa, Europe, and into Central Asia up to the early Ottoman Empire in the sixteenth century. Study of aniconism and iconoclasm, the presentation and collection of Islamic art in Western museums, and the influence of Islam on the intellectual and cultural life of the West.

Prerequisite: matriculation for the M.A. in art history.

ARTD 7146G Topics in Native American Art of the U.S. and Canada

45 hours; 3 credits
Examination of the visual arts of native North American cultures from the Eskimo to Canada, the Northwest and Southwest areas of the United States, the Plains, and Eastern Indian societies. Consideration of the visual arts in their historical and contemporary contexts, and in media such as architecture, painting, pottery, sculpture, textiles, and performance.

Prerequisite: Matriculation for the M.A. in art history or permission from the department chair

ARTD 7150G Topics in Pre-Columbian Art of Mesoamerica and the Andes
3-hour lecture plus conference; 3 credits
Exploration of the art and architecture of the major civilizations, such as the Maya, Aztec, and Inka, that flourished in the regions we now call Latin America from the first millennium BCE through the conquest and colonization by Spain in the sixteenth century. Course includes a brief evaluation of the effect of these indigenous traditions upon art and culture in Latin America from the colonial period to the modern era, including modernists such as Diego Rivera and Frida Kahlo.

Prerequisite: Matriculation for the M.A. in art history

ARTD 7151G The Art and Architecture of New Spain and the Andes, 1492-1821
45 hours; 3 credits
Examination of art and architecture of the former Spanish Viceroyalties of New Spain (Mexico), from 1521-1821, and the Andes, from c. 1534-1820.

Prerequisite: matriculation for the M.A. in art history.

ARTD 7154G The Art of Death and Dying in Mexico
45 hours; 3 credits
Examination of visual culture in Mexico, from 2000 B.C.E. to the present, with a focus on death, dying, and the afterlife.

Prerequisite: Matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

Architecture

ARTD 7076G Modern Architecture to World War I
30 hours plus conference; 3 credits
Origins of the modern movement in stylistic and technological developments of the nineteenth century. Formulation of diverse conceptions of a new architecture before World War I. (Not open to students who have completed Art 795G.)

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7078G Modern Architecture since 1914
30 hours plus conference; 3 credits
Major movements of theory and design in twentieth-century architecture. Modernism.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7156G History of Architecture: Ancient through Gothic
3 hours; 3 credits
Exploration of the history of architecture across the Mediterranean and Europe, beginning in Ancient Mesopotamia and Egypt and continuing with Greece, Rome, Byzantium, Islamic Spain, and Western Europe through the thirteenth century.

ARTD 7157G History of Architecture: Renaissance through Nineteenth Century
45 lecture hours; 3 credits
Exploration of the history of architecture in Europe and the United States from the Renaissance through the 19th Century.

Prerequisite: none

ARTD 7158G History of Architecture: Modern through Contemporary
45 lecture hours; 3 credits
Exploration of the history of architecture across the globe from the turn of the 20th century through contemporary practice. Key monuments and theories of the modern age.

Prerequisite: none

ARTD 7159G History of Urban Design and Planning
3 hours; 3 credits
Exploration of approaches to urban design and planning in Europe and the United States, beginning in the ancient world and continuing through the present day.

Special studies

ARTD 7160G Visual Culture Studies
3 hours plus conference; 3 credits
Exploration of visual culture and design issues from ancient to modern times. Interdisciplinary approach to the study of images across diverse media. Impact of the mass media on contemporary movements such as Pop Art. Influence of race and gender.

Prerequisite: Matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7165G Global Contemporary Art
45 hours; 3 credits
Examination of the development of contemporary art internationally from the post-war era to the present. Consideration of the historical and contemporary contexts of the countries and artists discussed as well as theoretical issues of globalism, diaspora, and hybridity. Artists include but are not limited to: Mona Hatoum, Shahzia Sikander, Walid Raad, Ai Wei Wei, Do Ho Su, Yoko Ono, Santiago Serra, Christoph Schlingensief, Chris Ofili, Helio Oiticica, Lygia Clark, William Kentridge, Ghada Amer, Michal Rovner and Omer Fast. Current museum and gallery exhibitions will be discussed.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7170G Basic Studies in Connoisseurship
30 hours plus conference; 3 credits
Seminar or colloquium. Comprehensive study of art history through examination and evaluation of works of art, of various periods, in museums and private collections. Meetings conducted by faculty and guest speakers. Comprehensive examination.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7175G Ancient to Modern Iconoclasm

45 hours; 3 credits
Examination of the practice of destroying images from c. 1500 B.C.E. to the present, with a focus on religious and politically motivated attacks.

Prerequisite: Matriculation for the M.A. in art history or permission from the department chair.

ARTD 7180G Art Theory and Criticism

30 hours plus conference; 3 credits
Perspectives on art from different cultures and periods; interpretation and analysis of works of art through various approaches from art history, art criticism, and art theory. New materials and definitions of contemporary art. Topics include biography, formal analysis, iconography, social history, gender, race, psychoanalysis, modernism, post-structuralism.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7183G Museology

45 hours; 3 credits
Exploration of the museum exhibition from the curatorial, educational and administrative perspective. Examination of the creation of narrative, selection of objects, layout and installation, and writing of didactics and labels to give students a comprehensive understanding of exhibition planning and execution. Practical consideration given to budget, fundraising and the incorporation of technology.

Prerequisite: Matriculation for the MA in Art History

ARTD 7184G Museum Education I

45 hours, 3 credits
Exploration of a variety of methodological approaches to object-based learning within a museum setting. Achievement of a comprehensive understanding of methods in museum education. Topics covered include discipline-based art education, visual thinking strategies, contextual model of learning, and other teaching/learning processes. Opportunity for students to observe onsite teaching in a museum setting and to learn how programs are developed.

Prerequisite: matriculation for the M.A. in art history.

ARTD 7185G Museum Education II

45 hours, 3 credits
Exploration of the diverse areas within Museum Education, including public programs, school programs, family programs and community outreach. Application of the various teaching methods explored in Art 7184 to the disparate areas that comprise the education departments in museums today

Prerequisite: Art 7184G.

ARTD 7190G Seminar in Art Historical Methodology

30 hours plus conference; 3 credits
Research, writing techniques, and methodologies essential to the field of art history. Topics include studying oeuvre catalogues, doing on-site archival work, and conducting interviews.

Prerequisite: matriculation for the M.A. in art history or permission of the deputy chairperson.

ARTD 7193G Internship in a Museum

60 hours, 3 credits
Work in a museum in one of the following departments: registrar, education, curatorial, or development.

Prerequisite: matriculation for the M.A. in art history and permission of the deputy chairperson.

ARTD 7194G Internship in an Arts Organization

60 hours, 3 credits
Work in a museum, gallery, auction house, archival or private collection, arts foundation or other arts-related organization.

Prerequisite: matriculation for the M.A. in art history and permission of the deputy chairperson.

ARTD 7197G Independent Study for the M.A. Thesis

60 hours; 3 credits
Research supervised by a faculty member dedicated towards completion of the M.A. thesis. Students may take this course up to two times.

Prerequisite: Matriculation for the M.A. in art history and permission of the deputy chairperson.

ARTD 7198G Special Problems I

30 hours plus conference each term; 3 credits each term
Research supervised by a faculty member in the student's major area. Students may take these courses more than once.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art and permission of the deputy chairperson.

ARTD 7199G Special Problems II

30 hours plus conference each term; 3 credits each term
Research supervised by a faculty member in the student's area of concentration. Students may take these courses more than once.

Prerequisite: matriculation for the M.A. in art history or for the M.F.A. in art and permission of the deputy chairperson.

STUDIO ART

Introductory courses

ARTD 7210X Workshop in the History of Art

60 hours; 3 credits
Study of past and present art using techniques of art history and the design workshop. Workshop assignments correlated with lecture material to develop historical insight through immediate experience.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education or permission of the deputy chairperson.

ARTD 7220X Workshop in the Theory and History of Design

60 hours; 3 credits
Historical analysis of basic design concepts. Evolution of handcrafted design from ancient times to the present. Assigned readings. Seminars and workshop demonstrations.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education or permission of the deputy chairperson.

ARTD 7250T Projects in Creative Art for the Classroom

30 hours plus conference; 3 credits
Initiation and development of projects in creative art in consultation with the instructor. Presentation of an evolving portfolio to both art and education faculty for evaluation. Must satisfy standards of originality and execution consistent with achievement of the advanced degree,

and demonstrate and document how personal artistic knowledge translates into classroom practice. (This course is the same as Education 7506X [781X]).

Prerequisite: matriculation for the M.A. in art education.

Drawing and painting

ARTD 7310X Advanced Drawing Techniques I

60 hours; 3 credits
Advanced work in various drawing media. Emphasis on development of mastery in creative draftsmanship and black-and-white composition. Figure drawing.

Prerequisite: matriculation for the M.F.A in art or for the M.A. in art education; and a minimum of two undergraduate drawing courses or permission of the deputy chairperson.

ARTD 7311X Advanced Drawing Techniques II

60 hours; 3 credits
Continuation of Art 7310X [733X].

Prerequisite: Art 7310X [733X].

ARTD 7410T Painting

60 hours; 3 credits
Advanced workshop in various painting media. Discussion of materials and techniques. Lecture.

Prerequisite: matriculation for the M.S. in Ed. in the liberal arts option in art; and Art 6210T [623.1T] or the equivalent of the course.

ARTD 7420X Advanced Painting Techniques I

60 hours; 3 credits
Advanced creative work in easel painting. Analysis of various techniques. Utilization of a variety of media.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education; and a minimum of two undergraduate painting courses or permission of the deputy chairperson.

ARTD 7421X Advanced Painting Techniques II

60 hours; 3 credits
Continuation of Art 7420X [743X].

Prerequisite: Art 7420X [743X].

Sculpture

ARTD 7510T Sculpture

60 hours; 3 credits
Workshop problems in elements of sculptured form, volume, and mass. Work in clay and plaster. Discussion of modeling, carving, construction, and the nature of materials with reference to masterworks. Lecture.

Prerequisite: matriculation for the M.S. in Ed. in the liberal arts option in art; and Art 6210T [623.1T] or the equivalent of the course.

ARTD 7520X Sculpture I

60 hours; 3 credits
Problems in creative sculpture stressing individual solutions and versatile craftsmanship in different materials and techniques. Discussion of history and theory of sculpture. Lecture.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education.

ARTD 7521X Sculpture II

60 hours; 3 credits
Problems in creative sculpture stressing individual solutions and versatile craftmanship in different materials and techniques. Discussion of history and theory of sculpture.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education; Art 7520X [751X] or a minimum of two undergraduate courses in three-dimensional design and sculpture media or permission of the deputy chairperson.

ARTD 7550T Ceramics

60 hours; 3 credits
Workshop in the development of creative ceramics skills for elementary school teachers. Forming, texturing, and glazing. Firing techniques; use and maintenance of kilns.

Prerequisite: matriculation for the M.S. in Ed. in the liberal arts option in art; and Art 6210T [623.1T] or the equivalent of the course.

ARTD 7560X Advanced Ceramics

60 hours; 3 credits
Traditional and contemporary methods of form making, decoration, glaze chemistry, firing techniques.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education; and at least one undergraduate course in ceramics.

Printmaking

ARTD 7610X Printmaking I

60 hours; 3 credits
Advanced work in a wide range of graphic techniques including etching, engraving, dry point, lithography, wood-block printing. Extensive work in drawing. Emphasis on individual creative achievement.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education.

ARTD 7611X Printmaking II

60 hours; 3 credits
Advanced work in a wide range of graphic techniques including etching, engraving, dry point, lithography, and woodblock printing for the experienced printmaker. Emphasis on individual creative achievement.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education; Art 7610X [763X] or a minimum of two undergraduate courses in printmaking techniques or permission of the deputy chairperson.

Photography

ARTD 7710T Photography

60 hours; 3 credits
Development of visual perception through photographic processes: the photogram, camera, films, exposure, analysis of negatives, darkroom procedures. Problems of lighting and previsualization. Discussion of the work of past and present master photographers. Lecture.

Prerequisite: matriculation for the M.S. in Ed. in the liberal arts option in art; and Art 6210T [623.1T] or the equivalent of the course.

ARTD 7720X Creative Photography I

60 hours; 3 credits
Advanced creative work in camera and darkroom techniques aimed at developing individual expression and technical mastery. Independent research incontemporary trends. Seminar discussion.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education; and a minimum of two undergraduate courses in creative photography or permission of the deputy chairperson.

ARTD 7730X Advanced Creative Photography II

60 hours; 3 credits
Continuation of Art 7720X [745X].

Prerequisite: Art 7720X [745X].

ARTD 7740X – Introduction to Digital Photography

60 hours of workshop; 3 credits
Digital photography as creative art. Understanding and using digital cameras. Using Photoshop to edit and enhance digital photographs. Students must supply their own digital cameras.

Prerequisite: Matriculation for the M.F.A. in art or for the M.A. in art education.

Digital art

ARTD 7810G The Aesthetics of Information

60 hours of workshop; 3 credits
Examination of critical thought about art and technology. Issues of identity construction, interface, performativity, virtuality, and representation. Creative projects as well as short papers are required.

Prerequisite or corequisite: matriculation for the M.F.A. in art or for the M.A. in art education.

ARTD 7820G Advanced Digital Art I

60 hours of workshop; 3 credits
Strategies of media translation, replication, and distribution, with an emphasis on cross-media creative work. Print, video, and net art projects.

Prerequisite or corequisite: matriculation for the M.F.A. in art or for the M.A. in art education.

ARTD 7821G Advanced Digital Art II

60 hours; 3 credits
Techniques of incorporating viewer intervention into a perceptual environment. Interactive art possibilities and venues, including site-specific installations (custom interface design and physical computing) and network based work (VRML or Quicktime VR). This course is the same as Computer and Information Science 7642G [753G].

Prerequisite or corequisite: matriculation for the M.F.A. degree in art or for the M.A. degree in art education or Computer and Information Science 7620X [741X] or 7640X [752X].

General and combined media

ARTD 7905G Techniques and Analysis of Contemporary Art

45 hours; 3 credits
Critical analysis of studio practice with an eye toward advanced techniques and a cross-disciplinary approach.

Prerequisite: Matriculation in MFA or MA Art Education

ARTD 7910X Writing and Practice

45 hours; 3 credits
A seminar taught by an eminent artist, critic, curator, or historian that aims to acquaint students with a broad range of critical thinking and to develop students' skills in verbal and textual analysis. It is intended as a stimulus to art-making and helps to form the critical and conceptual foundation for students to bring back to their studio practice. The course is taken in the third semester and includes artists' writings and the development of the students own thesis proposals.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education or permission of the deputy chairperson.

ARTD 7920X Collaborative Strategies

3 hours; 3 credits
A studio course in which students will work together to create co-authored artworks. Emphasis will be placed on experimental works bringing together disparate media. The role of collaboration in the arts will be discussed, including examples of important collaborative groups and examples of different models for collaboration. Students will be challenged to examine new communicative strategies vis-a-vis other artists. The course is taken in the first semester as an introduction to the ideas and art of all the students in the first year of graduate study.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education or permission of the deputy chairperson.

ARTD 7930G The Political Body

45 hours; 3 credits
In this practicum, students learn about the diversity of visual and conceptual strategies utilized by contemporary artists to address how the shifting political climate impacts the depiction of the human body. Topics that will be investigated include: gender, feminism, race, ethnicity, class, sexual orientation, and nationality, among others. The practical application of these various strategies will be discussed with students in group and individual studio critiques. The course will include weekly readings, five studio projects including a semester long art criticism project.

Prerequisite or corequisite: matriculation for the M.F.A. in art.

ARTD 7940G Master Seminar and Research

15 hours plus 60 hours independent work and conference; 3 credits
Evaluative and critical techniques in the visual arts, applying analytical criteria to the student's independent work in a medium. Examination of historical models of style and theory as antecedents of contemporary practice. Emphasis on independent development and exploration within a chosen medium. Preparation of a written prospectus. Review and approval by the graduate faculty committee is required before taking Art 7950G [782.2G].

Prerequisite: matriculation for the M.F.A. in art or permission of the deputy chairperson.

ARTD 7950G Master Project I

90 hours independent work and conference; 3 credits
Independent research, development, and production of creative work in the student's concentration. Written report. Review and approval of work in progress by the graduate faculty committee is required before taking Art 7951G [782.3G].

Prerequisite: Art 7940G [782.1G] and a minimum of two studio

courses related to the concentration.

ARTD 7951G Master Project II

90 hours independent work and conference; 3 credits
Continuation of Art 7950G [782.2G]. An exhibition of work and a written report are reviewed and must be approved by the graduate faculty committee at the end of the term.

Prerequisite: Art 7950G [782.2G].

Independent work

ARTD 7960G Internship

60 hours; 3 credits
Some undergraduate art teaching. Preparing lessons and instructional materials, and assisting the instructor in presentations and evaluations.

Prerequisite: matriculation for the M.F.A. in art and permission of the instructor.

ARTD 7970X Special Problems in Visual Arts Media I

90 hours of independent work plus conference each term; 3 credits each term
Research supervised by a faculty member in media problems related to the student's area of interest in the visual arts. Portfolio and/or paper each term.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education and permission of the deputy chairperson and instructor.

ARTD 7971X Special Problems in Visual Arts Media II

90 hours of independent work plus conference each term; 3 credits each term
Research supervised by a faculty member in media problems related to the student's area of interest in the visual arts. Portfolio and/or paper each term.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education and permission of the deputy chairperson and instructor.

ARTD 7972X Special Problems in Visual Arts Media III

90 hours of independent work plus conference each term; 3 credits each term
Research supervised by a faculty member in media problems related to the student's area of interest in the visual arts. Portfolio and/or paper each term.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education and permission of the deputy chairperson and instructor.

ARTD 7973X Special Problems in Visual Arts Media IV

90 hours of independent work plus conference each term; 3 credits each term
Research supervised by a faculty member in media problems related to the student's area of interest in the visual arts. Portfolio and/or paper each term.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education and permission of the deputy chairperson and instructor.

ARTD 7974X Special Problems in Visual Arts Media V

90 hours of independent work plus conference each term; 3 credits each term
Research supervised by a faculty member in media problems related to the student's area of interest in the visual arts. Portfolio and/or paper each term.

Prerequisite: matriculation for the M.F.A. in art or for the M.A. in art education and permission of the deputy chairperson and instructor.

ART EDUCATION

ARTD 6210T Introduction to Drawing and Color

60 hours; 3 credits
Workshop for students who are not art majors and want to continue in art beyond the basic workshop. Practice in drawing. Creative work in color. Discussion of masterworks of the past and present in terms of actual workshop problems. Museum visits. (Not open to students who have completed an introductory course in drawing or painting.)

Prerequisite: Matriculation for the M.A. in art education and a course in basic design.

The following inactive course(s) will only be offered if there is sufficient demand:

ARTD 7030G Early Florentine and Sienese Painting

Biology

Department office: 200 Ingersoll Hall Extension
Phone: 718.951.5396

Full-time Faculty

Professors: Basil, Eshel, Lipke, Polle, Quadri, Tramontano
Associate Professors: Forest, He, Ikui, Muth, Nishiura, Saxena, Singh, Wilson
Assistant Professors: Biais, Draghi, Forlano, Garcia-Sherman, Schvarzstein, Studamire
Lecturer: McEntee

Biology is a huge and diverse area of human knowledge that includes everything from the behavior of the molecules that code genetic information to enormous ecosystems that cover the surface of our planet. The Department of Biology offers courses and programs of study that reflect this tremendous range and depth of information. For some students, this means the study of crayfish and how they behave in muddy swamps, while for others there is the opportunity to dissect genes and see how they work. All students can discover something new about themselves and the world around them. Students in the master's programs have the opportunity to do their thesis research in one of the department's many research laboratories.

M.A. degree program in biology
HEGIS code 0401; SED program code 01987

This master of arts program offers advanced instruction and research in many areas of biology. The degree program includes lectures, colloquia, seminars, and may include laboratory work, and fieldwork. Thesis research may be conducted in one of the department's many laboratories, where faculty and students study cell, molecular, developmental, and behavioral biology. This degree prepares students to work in laboratories in academia as well as in biotechnology, pharmaceutical companies, and government laboratories within agencies such as the EPA or FDA. It also provides master's-level training for biology teachers. Students receiving the research-based degree are well prepared to go on to earn their doctorate.

The CUNY Ph.D. prepares students to teach at the college level and perform independent research in academia as well as in industrial and governmental labs.

Matriculation requirements

Applicants must offer adequate preparation in the following, with a grade point average of 3.00 or higher: a minimum of 8 credits of introductory biology; an appropriate general physics course; two terms of organic chemistry; and a minimum of two advanced courses selected from the following areas of study: botany, zoology, microbiology, biochemistry, cell biology, anatomy, ecology, evolution, general physiology, or genetics. The Biology Department's graduate admission committee selects candidates to be admitted to the program. An interview may be required of applicants. Candidates must submit 2 letters of recommendation and a personal statement. General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty credits are required for the degree. Students must complete 21 credits in courses in the Biology Department.

Students may fulfill requirements for the MA through either of the following plans. Student's applications must indicate whether they are applying to the research or library thesis based program.
Plan A: A research-based thesis degree
This degree is designed to prepare students for a research career and prepare students to move on to the Ph.D. or to prepare students for a research-based technical career.

The following courses are required: BIOL 7991G, BIOL 7100, BIOL 7150 and a minimum of 3 courses from the following list: BIOL 7005, BIOL 7141, BIOL 7503, BIOL 7007 or additional courses approved by the graduate deputy. Students must submit a research thesis and presentation acceptable to the department. No more than 2 credits in Biology 7910G may be counted toward the degree. Only one research course (advanced study or thesis research) may be taken each semester.
With permission of the deputy chairperson, the remaining credits required for the degree may be in courses in another science department.

Plan B: A library thesis based degree for students with education or pre-professional career plans. This option is designed to prepare students for non-research-based careers.

The following courses are required: BIOL 7991G, BIOL 7100 and a minimum of 2 courses from the following list: BIOL 7005, BIOL 7141, BIOL 7503, BIOL 7007 or additional courses approved by the graduate deputy. Students must submit a library thesis acceptable to the department. No more than 2 credits of BIOL 7910G may be counted toward the degree. Students may not use BIOL 7922 towards the degree. Only one

research course (advanced study or thesis research) may be taken each semester.
With permission of the deputy chairperson, the remaining credits required for the degree may be in courses in another science department.

Information about requirements for the thesis is in the section "Academic Regulations and Procedures."

M.A. degree program in education: biology teacher (7-12) HEGIS code 0401.01; SED program code 26742

Based on the required background in science, this program develops the student's knowledge of biology. Courses from the Department of Biology and the School of Department of Secondary Education are required. In the Department of Biology, courses are chosen from the offerings described for the master of arts, biology program. In the Department of Secondary Education, coursework is chosen from the following areas of study: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; and methods of teaching biology in grades 7-12. Also included are fieldwork and student teaching of biology. The program prepares students to teach biology and related sciences in secondary schools. Courses required for the degree vary depending on the entry qualifications of students. All students should consult the Head of the program in adolescence science education for the current requirements.

The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the Head of the program in adolescence science education for the current requirements.

Matriculation requirements

Applicants must offer adequate preparation in the following, with an average grade of B or higher in biology courses: general biology; general physics; an advanced course in botany, zoology, general physiology, and genetics; and two terms of organic chemistry.

Applicants must also offer (a) or (b):

(a) New York State Initial Certification in Adolescence Education in teaching biology for grades 7-12;

Courses in education or equivalent course work and teaching experience that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching biology in grades 7-12; 100 hours of fieldwork; 40 full days or 300 hours of student teaching of biology in grades 7-12, or one year of full-time teaching of biology in grades 7-12; passage of edTPA.

(b) an undergraduate degree with a major in biology or appropriate course work in biology.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) before being considered for admission. For more updated and complete information on minimum passing scores see the section on additional admission requirements for students with international credentials in the Graduate Bulletin or the program web page. At the discretion of the program, additional English courses may be required as a condition for admission.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the Head of the program in adolescence science education in the School of Education and the chairperson of the Biology Department.

Applicants should see the Head of the program in adolescence science education for advisement.

General matriculation and admission requirements of the Division of Graduate Studies are in the chapter "Admission."

Degree requirements

A minimum of 34 credits is required for the degree.

Students must complete 22 credits in biology and related areas.

Students must also complete either Option A or B below. With the approval of the science education program head, students enroll in the appropriate Option A or Option B based upon teaching experience, previous course work, and the teaching certificates they hold.

Option A (for in-service teachers):34 credits

This option is for students who possess a New York State Initial Certification in teaching biology grades 7-12, or its equivalent.

Students must complete 12 credits in courses in the Department of Secondary Education. Students take different education courses and sequences of courses depending on their previous course work, teaching experience, and the certificates they hold. Students who possess Initial Certification in teaching biology must complete all of the following:
SEED 7502T or SEED 7324X, SEED 7500X or SEED 7315X, SEED 7340T or SEED 7320T, and 7503X or 7038X or SEED 7325X.

Option B (for pre-service teachers):34-50 credits

Students who do not possess Initial Certification in teaching biology or equivalent course work and teaching experience or who are teaching but do not possess Initial Certification in teaching biology must have the appropriate course work and credits in the subject area and must complete appropriate courses in (a), (b) and (c) below:
(a) SEED 7500X or SEED 7315X, SEED 7501X or SEED 7314X, SEED 7502T or SEED 7324X, SEED 7503X or SEED 7325X, SEED 7340T or SEED 7320T.
(b) SEED 7380T, SEED 7381T, SEED 7383T, SEED 7542T, SEED 7543T.
(c) SEED 7671X.
The student teaching methods course (SEED 7380T) must precede the student teaching seminars (SEED 7381T and SEED 7383T) and field experience (SEED 7542T and SEED 7543T).
Students who wish to register for student teaching seminar and field placement in the science education program will need to file an application with the science education program head for permission. See program office for details.

Students must pass a comprehensive examination or submit a thesis acceptable to the Biology Department. Information about requirements for the comprehensive examination and the thesis is in the chapter "Academic Regulations and Procedures."

The program of study must be approved early in the first semester by the chairperson or the deputy chairperson of the Biology Department and the Head of the program in adolescence science education in the School of Education.

Fellowships

Some fellowships are available to qualified students. Inquiry should be made of the chairperson at the time of application.

CUNY Ph.D.

The City University of New York offers doctoral programs in biology and biochemistry. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." The Biology Department offers courses at Brooklyn College that are creditable toward the CUNY doctoral degree. For information about the courses, students should consult the deputy chairperson of the Biology Department and the executive officer of the doctoral program.

Sigma Xi

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

Courses

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

BIOL 7005X Genetics

60 hours; 4 credits
Prokaryotic and eukaryotic genetics; organization of DNA, replication repair, mutagenesis, recombination, control of gene expression, genetic engineering and molecular techniques.

Prerequisite: A course in genetics and/or molecular biology.

BIOL 7007G Molecular and Macroevolution

45 hours; 3 credits
Readings and commentary in molecular evolution and macroevolution. Exploration of the relationship between mutations and gene duplications with diversification, discussion of how natural selection leads to adaptation. Weekly written commentaries, and a major research project with oral presentation.

Prerequisites: A course in genetics or molecular biology

BIOL 7010T Modern Concepts in Biology I, II

60 hours each term; 4 credits each term
Significant contemporary concepts in biology. These courses may be taken more than once, with the permission of the chairman or graduate deputy.

BIOL 7013X Principles of Immunology

45 lecture hours; 3 credits
Innate and adaptive immunity with emphasis on the cellular and molecular mechanisms of immunity. Immune responses to viral, bacterial, fungal and protozoan pathogens, allergic hypersensitivity responses and autoimmune diseases. Recent developments in modifying the immune system to respond effectively to cancer, the development of more effective vaccines and the role of inflammation in disease. Case studies will provide a clinical context. (Not open to students who have taken BIOL 4013 or equivalent.)

Prerequisite: None

BIOL 7020T Modern Concepts in Biology I, II

60 hours each term; 4 credits each term
Significant contemporary concepts in biology. These courses may be taken more than once, with the permission of the chairman or graduate deputy.

BIOL 7027G Model Systems in Biology

30 hours; 2 credits
Introduction to a selection of biological systems used in different areas of biological research. Exploration of how and why different biological systems are used to solve biological problems, the advantages of selected systems to solve specific problems, and how Biology faculty are using these systems in their research. It will give students an opportunity to see the types of research faculty are involved in and can help them choose a thesis research topic.

BIOL 7077G Molecular Phylogenetics and Evolution

45 hours; 3 credits
Introduction to conceptual foundations of molecular phylogenetics, the application of molecular data to the study of evolutionary relationships; analysis and interpretation of phylogenetic trees in the popular and scientific press; methods for the analysis of molecular data and construction of molecular phylogenies. Classroom lectures, complemented by hands-on practicals with real-world datasets. Weekly assignments, take-home quizzes and paper summary and presentation.

BIOL 7080G Journal Club

15 hours; 1 credit
Student presentation of current research papers provide an opportunity to read literature, develop an understanding of an area of research and present both an overview and a current paper that they have selected for critical analysis by the class. This course may be taken twice for credit.

BIOL 7100G Molecular Biology

75 hours; 5 credits
Structure and function of biomolecules; enzyme mechanisms; replication, transcription, translation; regulation of macromolecular biosynthesis; energy transformations.

Prerequisites: A course in genetics or molecular biology or biochemistry.

BIOL U7110X Biotechnology of Algae

2 hours lecture, 1 hour discussion section; 3 credits
Phylogeny, evolution, habitats, growth cycles, and genetic engineering of algae; biosynthetic pathways of algal products and their metabolic regulation; interdisciplinary topics including designing bioreactors, nutritional value of natural products from algae; the economic aspects of patent and management of companies dealing with algae. A required in-depth discussion of topics pertinent to algal biotechnology will take place following every lecture.

Prerequisite: Biology 1072 [29]; Chemistry *1100 [1] or its equivalent.

BIOL U7121X Introduction to Recombinant DNA Technology: Lecture

30 hours; 2 credits
This course is an introduction to the molecular biology of the gene and some of the methodologies used for the isolation and cloning of genes.

BIOL U7122X Introduction to Recombinant DNA Technology: Laboratory

120 hours; 4 credits
Laboratory work related to the subject matter of Biology U7121X [712.01X]

Prerequisite or corequisite: Biology U7121X [712.01X].

BIOL U7141G Cell Biology: Lecture

60 hours lecture and conference; 4 credits
Intensive study of major areas of cell biology; integration of cellular ultrastructure; metabolism; transmission of cellular information.

Prerequisite: Molecular Biology 7100G

BIOL 7150G Cell and Molecular Biology Techniques

60 hours lab, 15 hours recitation, 3 credits
Experiments designed for cell and molecular biology with a strong emphasis on modern lab techniques including molecular cloning and DNA recombination.

Prerequisite or co-requisite: BIO7100G

BIOL U7160X Cells in Culture

60 hours laboratory, 15 hours recitation; 3 credits
A mixed-format course on the use of cells in culture, including laboratory experience and a recitation hour. In the laboratory, students perform a series of planned experiments on cell cultures to become familiarized with research techniques. In addition, students carry out a limited project of their own design after consultation with the instructor. The recitation hour includes discussions of essential techniques used to culture cells and discussions of representative papers from the research literature.

Prerequisite: permission of the instructor.

BIOL U7170X Advanced Cell Culture Techniques

60 hours laboratory, 15 hours recitation; 3 credits
An advanced course on cell culture techniques in which students are responsible for researching the literature and designing one or two advanced sets of experiments from a common list of project topics after consultation with the instructor. The planning of the projects is to include considerations of cost and sources of supply, timing of purchase, equipment availability, reagent preparation, a written proposal of objectives, detailed experimental protocols, appropriate control experiments, recording of results, potential statistical analysis, hypothesis testing, and final interpretation of results. Each project will be concluded with the submission of a written report and an oral presentation.

Prerequisite: Biology U7160X [716X] and the permission of the instructor.

BIOL 7180G Cancer Biology

45 hours, 3 credits
The fundamental principles of the molecular and cellular biology of cancer cells. The role of growth factors, oncogenes, tumor suppressor genes, angiogenesis and signal transduction mechanisms in tumor formation. Maintenance of genomic integrity and tumorigenesis. Discussion on recent therapeutic advances in cancer treatment and principles of drug action in cancer management.

Prerequisite: A course in genetics or molecular biology or biochemistry.

BIOL U7321X Applied Microbiology: Lecture

30 hours; 2 credits
Applied methods in microbiology. Study of growth, metabolism, and genetics of bacteria and fungi, relating to industrial, environmental, food, and medical microbiology.

Prerequisite: a course in microbiology.

BIOL 7331G Global Bacterial, Protozoan and Viral Killers

45 hours; 3 credits
Global public health threats, global infectious diseases, tuberculosis, malaria and
AIDS epidemics, and Mycobacterium tuberculosis, Plasmodium falciparum, and HIV biology.

BIOL U7503X Developmental Biology

60 hours; 4 credits
Embryonic development of both invertebrates and vertebrates. Topics include transformation of a fertilized egg to a young animal, cell differentiation, formation of different organs/tissues, signal transduction during development, molecular bases of behavior and human neural disease models.

Prerequisite: none.

BIOL 7650X Biology of Estuaries

45 hours; 3 credits
Survey of estuaries and coastal ecosystems; an introduction to major estuarine processes, habitats, and organisms; factors affecting community structure and function. Three all-day field trips.

Prerequisites: open to biology graduates; with permission of the instructor, open to graduates in geology, chemistry, and engineering.

BIOL U7910G Colloquium

15 hours; 1 credit
Discussion of recent contributions and research in progress in biology. No more than 2 credits in this course may be applied toward the degree.

BIOL U7921G Advanced Study

30 hours; 2 credits
Tutorial study with a faculty member in an area in which formal course work is not offered. Assigned reading, reports, and laboratory or fieldwork. Weekly discussion and examinations by arrangement with the instructor. May be taken only once.

BIOL U7922G Advanced Study

60 hours; 4 credits
Tutorial study with a faculty member in an area in which formal course work is not offered. Assigned reading, reports, and laboratory or fieldwork. Weekly discussion and examinations by arrangement with the instructor. May be taken only once.

BIOL U7931G Seminar in Special Topics

15 hours each term; 1 credit each term
Topical discussion of recent contributions in biology. Course content varies from term to term.

BIOL U7932G Seminar in Special Topics

30 hours each term; 2 credits each term
Topical discussion of recent contributions in biology. Course content varies from term to term. Students may not repeat topics.

BIOL U7933G Seminar in Special Topics

45 hours; 3 credits
Topical discussion of recent contributions in biology. Course content varies from term to term.

BIOL U7941X Experimental Biology: Lecture

45 hours; 3 credits
Experimental approach to problems in biology. Course content varies from term to term.

BIOL U7942X Experimental Biology: Laboratory

90 hours; 3 credits
Experimental approach to problems in biology. Course content varies from term to term.

BIOL U7951X Research Topics in Biology

45 hours; 3 credits
Lecture in selected areas of modern biology. Course content varies from term to term. Students may take this course twice, but may not repeat topics. (Not open to students who have completed the same topic in Biology 795.2X.)

BIOL 7991G Thesis Research

45 hours each term; 2 credits each term
Research for master's thesis supervised by a faculty member. No more than four credits may be counted toward the degree. Credit is not earned until the thesis is accepted.

Prerequisite: completion of all graduate laboratory courses recommended by the department graduate studies committee.

BIOL 7992G Thesis Research

45 hours each term; 2 credits each term
Research for master's thesis supervised by a faculty member. No more than four credits may be counted toward the degree. Credit is not earned until the thesis is accepted.

Prerequisite: completion of all graduate laboratory courses recommended by the department graduate studies committee.

Business Management

Department office: 218 Whitehead Hall
Phone: 718.951.5154

Full-time Faculty

Professors: Bell, Clarke, Connell, Davidoff, Fogel, Friedman, Hopkins, Lopez-Pumarejo, Queneau, Stone
Associate Professors: Amoo, Frankenstein, Hirakubo, Langbert, Lewis, Lynch, Manlow, Scott
Assistant Professors: Birnbaum, Chiu, Hampton-Sosa, Raghupathi
Lecturers: Bassell, Reich, Weinstein

M.S. degree program in business administration
HEGIS code 0517; SED program code 01895

Please note that Option 5 is contingent on NYSED approval and will not accept applications for admission prior to a Spring 2016 entry date.

A business administration degree can provide students with a variety of career paths ranging from public policy to international finance to banking. The Accounting, Business Management, Finance, and Economics Departments offer a 33-credit master of science degree in business administration with five options for specialization: economic analysis, global business, accounting, general business, business intelligence and data analysis.

Option one is more flexible and allows students to explore different areas of economics including health economics, public finance and public policy, and international trade.
Option two is more focused and is expressly for students with an interest in global business. It includes courses in global finance and management, international economics and finance, bargaining and conflict resolution, global business environment, and international human resource management.
Option three is for students with an interest in accounting. An undergraduate degree in accounting is not required. However, this option is only open to students who have taken Accounting 2001, 3001, 3011, 3021, and 3101(introductory accounting, managerial accounting, financial accounting, and income taxation) or the equivalent.
Option four is a more flexible major for those interested in general business. It is of interest to those who may have had previous undergraduate or graduate coursework in business and want to obtain a general business degree and also to those who never previously had such coursework and want to obtain a business degree. It can be customized by the student to the student's interest in a broad range of business topics.
Option five is for students interested in a career in applied statistical analysis or business analytics

All applicants must have undergraduate courses in macroeconomics, microeconomics, statistics, and calculus.

Degree requirements

A minimum of thirty-three credits is required for the degree. Students must complete at least 24 credits in the Business Management, Accounting, Finance, and Economics Departments.

The following courses are required: Economics 7000X, 7010X, 7020X, 7021X, 7025X. Option 1 students who have taken Mathematics 2101 or equivalent may, with permission of the graduate deputy, waive Economics 7025X, and substitute an appropriate course in Economics or another department. Option 1 students who have taken Mathematics 2501 or Mathematics 3501 or equivalent may, with permission of the graduate deputy, waive Economics 7020X, and substitute an appropriate course in Economics or another department. Students selecting Option 2 or Option 3 (below) may take either Economics 7000X or Business 7206X. They also take either Economics 7020X or Business 7276X; Economics 7021X or Business 7279X; Economics 7010X or Economics 7215X or [Business 7215X] or Finance 7215X; and either Economics 7025X or Business 7278X. Option 3 students who have taken an undergraduate course in calculus may, with the permission of the graduate deputy, waive Economics 7025X and substitute a course from the Option 3 requirements listed below. With permission of the graduate deputy chairperson, up to nine credits may be taken in appropriate courses in other departments. With permission of the graduate deputy chairperson, up to 12 credits may be accepted for work done at other institutions. Option 4 students with permission of the graduate deputy may substitute any or all courses from the graduate core of Economics 7000X or Business 7206X, Economics 7010X or Economics 7215X or Finance 7215X or [Business 7215X], Economics 7020X, Economics 7021X or Business 7279X, Economics 7025X or Business 7278X with any Business course. This will typically be allowed for those with previous undergraduate or graduate coursework in these course topics. Option five students take the courses described below.

Students select one of the following options to complete the remaining credits:

Option 1: Economic Analysis

A minimum of 18 credits (6 courses) from the following: Economics 7215X or Finance 7215X or [Business 7215X], Economics 7027X, Economics 7028X, Economics 7030X, Economics 7040X, Economics 7045X, Economics 7050X, Economics 7055X, Economics 7060X or Health and Nutrition Sciences 7144X, Economics 7090X and Economics 7095G. With the permission of the graduate deputy chairperson, students may be allowed to take up to 6 credits of other courses to complete the 18 credit requirement in Option 1.

Option 2: Global Business

A minimum of 18 credits (6 courses) from the following: Business 7131X, Business 7200X, Business 7202X, Business 7204X, Business 7208X, Business 7210X, Business 7212X, [Business 7216X] or Finance 7216X, Business 7220X,, [Business 7240] or Finance 7240X, Business 7250X or Psychology 7246G, Business 7255X or Psychology 7247G, Business 7257X, 7260X, 7265X, 7278X, 7279X, 7290X, 7203X or Television and Radio 7727X, Economics 7215X or [Business 7215X] or Finance 7215X, Economics or Business 7230X, Economics 7027X, Economics 7028X, Economics 7030X, Economics 7060X or Health and Nutrition Sciences 7144X, and Economics 7095G. With the permission of the graduate deputy chairperson, students may be allowed to take up to 6 credits of other courses to complete the 18 credit requirement in Option 2.

Option 3. Accounting

A minimum of 18 credits (6 courses) from the following: Accounting 7108X, Accounting 7109X, and at least two additional courses with an Accounting prefix; Business 7131X or Accounting 7131X; [Business 7215X] or Finance 7215X or Economics 7215X, [Business 7216X] or Finance 7216X, Business 7230X, [Business 7240X] or Finance 7240X, Business 7260X, and Business 7290X. With the permission of the graduate deputy chairperson, students may be allowed to take up to 6 credits of other courses to complete the 18 credit requirement in Option 3.

Option 4. General Business.

A total of 33 credits with a minimum of 18 credits (6 courses) from any Business graduate course. As noted above, the 5 graduate program core classes may be substituted by additional Business courses with permission of the graduate deputy.

Option 5. Business Intelligence and Data Analysis

A total of 33 credits. The required courses for this option are: Economics 7000X or Business 7206X; Economics 7010X or Economics 7215X or Finance 7215X; Economics 7025X for students who have not taken at least one year of calculus; Business 7276X, Business 7278X, Business 7279X or Business 7290X, Business 7230X or Economics 7230X, Economics 7020X, and Economics 7021X.
With the permission of the graduate deputy chairperson, students will be advised which additional courses to take to complete the 33 credits.

Courses

BUSN 7131X Tax Regulation & Strategy

45 hours; 3 credits
The practical application of accounting and government regulations regarding the taxation of individuals and entities. Legal aspects of operating a business, regulation, and corporate social responsibility. The federal tax process, procedures, accounting, and planning are explored. This course is the same as Accounting 7131X.

Prerequisite: At least 9 credits of undergraduate courses in accounting

BUSN 7200X Organization Behavior

30 hours plus conference; 3 credits
History of management thought; individual needs, values, motivation, career development, small groups, formal organization, management processes. (Not open to students who have completed Economics 705.2X.)

BUSN 7202X Bargaining and Conflict Resolution

30 hours plus conference; 3 credits
The nature and dynamics of conflict and the methods to resolve conflict. Focus on mutual problem-solving approaches and mediation. New developments in the economic theories of bargaining, nature of conflict, power, conflict resolution, the nature of negotiation, finding negotiation leverage, principled negotiation, mediation and arbitration. Trends in the discipline of conflict resolution.

BUSN 7203X Media Marketing and Promotion

45 hours; 3 credits
Principles of marketing and promotion. Developing marketing and promotion strategies. Implementing campaigns. Evaluating their effectiveness in attracting audiences and building audience share in increasingly competitive electronic mass communication industries. This course is the same as Television and Radio 7727X [727X].

Prerequisite: an undergraduate course in marketing or permission of the deputy chairperson.

BUSN 7204X Strategic Management and Business Policy

30 hours plus conference; 3 credits
Focuses on strategy, value creation, and value capture in different business contexts within changing business environments of the 21st century. Provides students with an integrative, top management perspective of directing a business. Special attention will be paid to the role of strategic issues in entrepreneurial ventures and small businesses.

BUSN 7205X Managerial Economics

30 hours plus conference; 3 credits
An introduction to microeconomic concepts -- demand cost, profit, pricing strategies, forecasting--with applications to managerial decision making. (Not open to students who have completed Economics 7000X [700X].) This course is the same as Economics 7205X [705X].

BUSN 7206X Microeconomics for Business Decisions

30 hours plus conference; 3 credits
Drawing upon modern managerial economics, this course will develop students' ability to apply the tools of economic analysis to make business decisions. The course will cover the following topics: economists' view of behavior, markets and organizations, demand, production and cost, market structure, pricing, strategy and game

theory, incentive conflicts and contracts, organizational architecture, decision rights, human resource decisions, vertical integration and outsourcing, leadership and change within organizations, regulation, and creating organizational architectures that foster ethical behaviors.

BUSN 7208X Marketing Management

30 hours plus conference; 3 credits
A comprehensive course examining the fundamental concepts and principles involved in the marketing of goods, services, and ideas. Topics covered include: marketing for nonprofit organizations, environments of marketing, strategic planning, buyer behavior, marketing research, market segmentation, product planning and development, pricing, promotion, international marketing, and marketing ethics. (Not open to students who have completed Economics 608X or 709X or Business 608X).

Prerequisite: at least 12 credits in undergraduate courses in accounting, business, and/or economics or permission of the graduate deputy chairperson.

BUSN 7209X Business Management of Sports

45 hours; 3 credits
Principles of management; accounting, budgeting, and control systems for sports organizations, athletic facilities and institutions; labor relations, payroll procedures and taxation; break-even analysis; case studies. (Not open to students who have completed Business 609X.)

Prerequisite: Economics 7010X or Accounting 7101X [701X] or an equivalent college-level accounting course.

BUSN 7210X Innovation and the Drive for Growth

30 hours plus conference; 3 credits
New international centers of innovation, including China, India, Israel, Japan, Latin America, and Russia, as well as the United States and Western Europe. The drive for growth. Examples from international business strategy and structure. Corporate and government approaches to managing innovation.

BUSN 7212X Internet Marketing and Social Media

45 hours; 3 credits
Role of the Internet-based marketplace and social media in the business environment. Impact of digital marketing business practices on a company's corporate objectives. Analysis of the infrastructure needed to deploy an effective e-business operation including security, transactions, search engine optimization, and digital marketing methods.

Prerequisite: Undergraduate courses in marketing and finance.

BUSN 7220X Global Business Environment

30 hours plus conference; 3 credits
Key issues and challenges facing businesses in an increasingly global and complex environment. Topics include: globalization, culture, and society, technology trends, regulation, competing models of capitalist operation, state-firm relations, industrial policy and stakeholder activism. The nature of these challenges, their influence on business, and the ways in which business can manage them.

BUSN 7230X Operations Research and Decision Sciences

30 hours plus conference; 3 credits
Tools and techniques of operations research and decision sciences. Quantitative techniques used in business, accounting, and economics including project design and management, scheduling, forecasting, linear programming, inventory and queuing theory, applications of input-output methods. This course is the same as Economics 7230X.

BUSN 7250X International Human Resource Management

45 hours; 3 credits
Human resource decisions and practices in an international context. Topics include: recruiting, selection, expatriation, repatriation, training, career management, performance management, compensation, and cross-cultural issues. This course is the same as Psychology 7246G [788.29G].

Prerequisite: an undergraduate course in human resource management or permission of the instructor.

BUSN 7255X Managing Diversity in the Global Economy

45 hours; 3 credits
The course will cover the following topics: diversity and individuals; defining diversity in a global context; theoretical perspectives on workplace diversity; diversity legislation in a global perspective; discrimination and fairness in employment; global demographic trends; diversity management; interpersonal relationships in a global context; intercultural communication process; intercultural negotiation process; politico-legal, economic and business environments in selected countries in a comparative perspective with those of the United States; and cultural values, communication patterns and negotiation styles in selected countries. This course is the same as Psychology 7247G [788.28G].

BUSN 7257X Global Workplace Communication

30 hours plus conference; 3 credits
The role of intercultural communication in global workplace settings. Topics include culture and communication, language and intercultural business communication, understanding other cultures, self-identity and social organization, message organization for other cultures, and nonverbal language and communication. Intercultural communication approaches for business information, negotiation and conflict resolution, and corporate culture.

BUSN 7260X Entrepreneurship in a Global Economy

30 hours plus conference; 3 credits
The course examines the following topics: Introduction to entrepreneurship; recognizing opportunities and generating ideas; feasibility analysis; Writing a business plan; Industry and competitor analysis; developing an effective business model; Preparing the proper ethical and legal foundation; Assessing a new venture's financial strength and viability; Building a new venture team; Getting financing or funding; Unique marketing issues; Intellectual property issues; Preparing for and evaluating the challenges of growth; Strategies for firm growth; franchising; and global entrepreneurship.

BUSN 7265X Corporate Social Responsibility and Organizational Leadership

45 hours; 3 credits
This course examines how organizations and executives can and should balance responsibilities to their customers, employees, community, society, other stakeholders, and the environment. The course will use textbook readings, cases and other teaching tools to demonstrate how an effective leader integrates the social and fiduciary dimensions of a business problem to make responsible choices and maintain the long-term viability of the organization.

BUSN 7276X Business Analytics

30 hours plus conference; 3 credits
Introduction to business analytics, data mining, and big data. Business intelligence; descriptive/predictive/prescriptive analytics; data warehouses and data marts; dashboards and scorecards; data visualization; text and web mining; data mining techniques in business decision making; business issues in analytics. Cases, projects and hands-on analytics software use.

Prerequisite: Undergraduate course in statistics and proficiency with spreadsheets.

BUSN 7278X Applied Data Analysis

30 hours plus conference; 3 credits
An overview of applications of multivariate analysis in finance and business research, including Multiple Linear Regression, Logistic Regression, Multivariate Analysis of Variance/Covariance, Factor Analysis, and other relevant topics.

Prerequisite: one undergraduate course in statistics.

BUSN 7279X Applied Business Research

30 hours conference; 3 credit
Students will learn how to define a research problem, to evaluate secondary data, to choose the appropriate research design, to develop measurement instruments, to evaluate different sample designs, to collect primary data, to use various statistical techniques to analyze data, and to present data, research findings, and recommendations in an ethical manner.

Prerequisite: Economics 7020X [720] or Business 7276X or Business 7278X.

BUSN 7290X Internship

Minimum of 140 hours of fieldwork; 3 credits
Off-campus internship at a site approved and supervised by a faculty member. Final report and evaluation of supervisor are required.

Prerequisite: Permission of the department

Chemistry

Department office: 359 Ingersoll Hall Extension
Phone: 718.951.5458

Full-time Faculty

Professors: Ciszkowska, Davenport, Greer, Kobrak, Levine, Magliozzo, Sanchez-Delgado
Associate Professors: Contel, Dowd, Gibney, Jarzecki, Juszczak
Assistant Professors: Czajkowska, Gallicchio, Gerona-Navarro, Murelli, Torrente
Lecturers: Horowitz, Mathias

The Chemistry Department has a distinctive history and is recognized by the American Chemical Society for its ability to prepare chemistry students to enter the workplace in industry, education, and health fields.

For over sixty years, the department's graduate programs have been a center of education and research for the city of New York. The many illustrious alumni in the field of chemistry include Nobel Laureate Stanley Cohen. With a supportive environment and small classes, students from a diverse population work closely with faculty.

The department offers exciting opportunities for graduate students to pursue their goals in diverse areas of research in a dedicated campus building with over fifty thousand square feet of research and lab space.

M.A. degree program in chemistry
HEGIS code 1905; SED program code 02083

This program is intended for students who seek advanced study in the fundamentals of chemistry. It is appropriate for individuals wishing to pursue careers in the chemical and pharmaceutical industries in research and development or in quality control positions or as preparation for doctoral studies. Students complete the degree by passing a comprehensive exam.

Matriculation requirements

Applicants must offer the following: two terms of general chemistry including qualitative analysis; one term of analytical chemistry; two terms of organic chemistry; two terms of physical chemistry; two terms of calculus; and two terms of general physics.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Thirty credits are required for the M.A. degree.
Students must complete 24 credits in courses in the Chemistry Department. The following courses are required:
Chemistry 7110G, 7761G, 7550G, 7571G or 7670G, 7640G, 7420G and 7421G.

The remaining credits required for the M.A. degree may be in graduate courses in any department approved by the deputy chairperson.

Students must pass a comprehensive examination.

Courses in the Chemistry Department offered toward the degree must be 7000-level courses.

The program of study must be approved by the deputy chairperson.

M.S. degree program in chemistry
HEGIS code 1905; SED program code 35301

This program is designed for students who wish to gain experience in research in preparation for careers in the chemical and pharmaceutical industries or as preparation for doctoral studies, with an emphasis on gaining research skills. Students performing research for a thesis may acquire training in several spectroscopic techniques (optical and magnetic resonance), in microscopy, electrochemistry, chemical synthesis (organic, inorganic), in enzymology and rapid kinetics measurements, in chemical computing using modern theoretical methods, and in the application of the tools of modern biochemistry/biotechnology.

Matriculation requirements

Applicants must offer the following: two terms of general chemistry including qualitative analysis; one term of analytical chemistry; two terms of organic chemistry; two terms of physical chemistry; two terms of calculus; and two terms of general physics.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Thirty credits are required for the M.S. degree.

Students must complete 26 credits in courses in the Chemistry Department. The following courses are required:
Chemistry 7110G, 7761G, 7550G, 7571G or 7670G, 7640G, 7420G, 7421G.
Students must complete Chemistry 7910G and submit a thesis acceptable to the department. Either Chemistry 7420G or 7421G (listed above) must be completed before work is begun on the thesis. Information about requirements for the thesis is in the section "Academic Regulations and Procedures" of the Graduate Buleltin.

The remaining credits required for the M.S. degree may be in graduate courses in any department approved by the deputy chairperson.

Courses in the Chemistry Department offered toward the degree must be 7000-level courses.

The program of study must be approved by the deputy chairperson.

M.A. degree program in education: chemistry teacher (7-12) HEGIS code 1905.01; SED program code 26766

Students choosing this program gain in-depth knowledge of some area of modern organic, inorganic, quantum chemistry, biochemistry or instrumental analysis. Seminar courses provide exposure to diverse subject matter in areas of current research interest within the department and beyond. Students also receive a detailed introduction to the use of the teaching laboratory in adolescent education. The School of Education component prepares students for teaching; the required courses vary depending on the entry qualifications of students. The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the Head of the program in adolescence science education for the current requirements.

Matriculation requirements

Applicants must offer courses in chemistry as follows: one year of general chemistry; a comprehensive course in organic chemistry (may be one or two terms depending on curriculum) one term of physical chemistry; and one semester of analytical chemistry.

Applicants must also offer (a) or (b):

(a) New York State Initial Certification in teaching chemistry grades 7-12; or
courses in education or equivalent course work and teaching experience that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching chemistry in grades 7-12; 100 hours of fieldwork; 40 days or 300 hours of student teaching chemistry in grades 7-12, or one year of full-time teaching of chemistry in grades 7-12; passage of the edTPA.

(b) An undergraduate degree with a major in chemistry or appropriate course work in chemistry.

Applicants must have a minimum undergraduate scholastic index of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) before being considered for admission. For more updated and complete information on minimum passing scores see the section on additional admission requirements for students with international credentials in the Graduate Bulletin or the program web page. At the discretion of the program, additional English courses may be required as a condition for admission.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the Head of the program in adolescence science education in the School of Education and the chairperson of the Chemistry Department.

Applicants should see the Head of the program in adolescence science education for advisement.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

A minimum of 30 credits are required for the degree.

Students must complete at least 12 credits in Chemistry. This must include at least one of the following courses: Chemistry 7761G, 7550G, 7571G,

7670G or 7640G.

Students must also complete either Chemistry 7450G or 7950.

Six of the remaining 18 credits required for the degree may be taken in the Chemistry Department or in other science subjects directly related to chemistry.
Students must also complete either Option A or B below. With the approval of the science education program head, students enroll in the appropriate Option A or Option B based upon teaching experience, previous course work, and the teaching certificates they hold.

Option A (for in-service teachers): 30 credits
This option is for students who possess a New York State Initial Certification in teaching chemistry grades 7-12, or its equivalent.
Students must complete 12 credits in courses in the Department of Secondary Education. Students take different education courses and sequences of courses depending on their previous course work, teaching experience, and the certificates they hold. Students who possess Initial Certification in teaching chemistry must complete all of the following:
SEED 7502T or SEED 7324X, SEED 7500X or SEED 7315X, SEED 7340T or SEED 7320T, and SEED 7503X or SEED 7038X or SEED 7325X.

Option B (for pre-service teachers):30-46 credits
Students who do not possess Initial Certification in teaching chemistry or equivalent course work and teaching experience or who are teaching but do not possess Initial Certification in teaching chemistry must have the appropriate course work and credits in the subject area and must complete appropriate courses in (a), (b) and (c) below:
(a) SEED 7500X or SEED 7315X, SEED 7501X or SEED 7314X, SEED 7502T or SEED 7324X, SEED 7503X or SEED 7325X, SEED 7340T or SEED 7320T.
(b) SEED 7380T, SEED 7381T, SEED 7383T, SEED 7542T, SEED 7543T.
(c) SEED 7671X.

Students who wish to register for student teaching seminar and field placement in the science education program will need to file an application with the science education program head for permission. See program office for details.
Students must pass a comprehensive examination or submit a thesis acceptable to the Chemistry Department. Information about requirements for the comprehensive examination and the thesis is in the chapter "Academic Regulations and Procedures."

Courses in the Chemistry Department or other science departments and the School of Education offered toward the degree must be 7000-level courses.
The program of study must be approved early in the first semester by the chairperson or the deputy chairperson of the Chemistry Department and the Head of the program in adolescence science education.

CUNY Ph.D.

The City University of New York offers doctoral programs in chemistry and biochemistry. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Chemistry Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Chemistry Department and the executive officer of the doctoral program.

Sigma Xi

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

Courses

Registration for courses numbered 7000 and higher requires permission of the deputy chairperson.

Unless a prerequisite is specified, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

CHEM 6160T Chemistry for Secondary School Teachers

45 hours; 3 credits
Elementary study of theories of chemistry including organic, inorganic, and physical chemistry. This course is for students who plan to teach science in high school. (Not open to matriculants in the M.A., Teacher Education Program, secondary education in chemistry.)

Prerequisite: two terms of general chemistry.

CHEM 7110G Seminar

30 hours each term; 2 credits each term
Topics selected from various branches of chemistry. Seminars consist of library research and discussion of literature on selected topics or presentation of experimental methods and results.

CHEM 7120G Seminar

30 hours each term; 2 credits each term
Topics selected from various branches of chemistry. Seminars consist of library research and discussion of literature on selected topics or presentation of experimental methods and results.

CHEM 7130G Seminar

30 hours each term; 2 credits each term
Topics selected from various branches of chemistry. Seminars consist of library research and discussion of literature on selected topics or presentation of experimental methods and results.

CHEM 7420G Basic Laboratory Techniques for Research

30 hours lecture, 90 hours laboratory each term; 5 credits each term
Theories and application of modern approaches to the solution of chemical problems.

CHEM 7421G Basic Laboratory Techniques for Research

30 hours lecture, 90 hours laboratory each term; 5 credits each term
Theories and application of modern approaches to the solution of chemical problems.

CHEM 7450G Chemistry Teaching Laboratory Management

30 hours lecture, 60 hours lab; 4 credits
Basics of creating a chemistry laboratory curriculum, including laboratory safety, the procurement, storage, dispensing and disposal of chemicals, and budgeting experiments. Introduction to modern laboratory pedagogies. Role of chemistry in modern society, with examples of industrial chemistry and information on careers in the field.

Prerequisite: one semester of organic chemistry and one semester of analytical chemistry.

CHEM 7550G Advanced Organic Chemistry

45 hours; 3 credits
Fundamentals of organic chemical principles, reactions, structures, and mechanisms.

Prerequisite: two terms of organic chemistry.

CHEM 7571G Biochemistry

45 hours lecture; 3 credits
Properties and reactions of compounds of biological importance. Enzyme kinetics. Biological membranes. DNA replication and repair.

Prerequisite: two terms of organic chemistry.

CHEM 7581G Advanced Biochemistry

45 hours lecture; 3 credits
Common metabolic pathways. Reaction mechanisms and regulation of principal biological pathways. Biochemistry of metabolic disorders with clinical implications.

Prerequisite: Chemistry 7571G [757.1G].

CHEM 7640G Quantum Chemistry

45 hours; 3 credits
Foundations of quantum mechanics with applications to atomic and molecular structure.

Prerequisite: two terms of physical chemistry.

CHEM 7670G Chemical Thermodynamics

45 hours; 3 credits
Development of the thermodynamic foundations of chemical processes using classical and statistical-mechanical approaches.

Prerequisite: two terms of physical chemistry.

CHEM 7761G Advanced Inorganic Chemistry

45 hours; 3 credits
Theoretical and experimental fundamentals of atomic and molecular structure. Emphasis on physical interpretation.

Prerequisite: two terms of physical chemistry.

CHEM 7800G Special Topics in Chemistry

45 hours; 3 credits
Lectures on selected topics or recent advances.

CHEM 7810G Introduction to Laboratory Research

60 hours laboratory; 2 credits
For students who want to explore the feasibility of different research problems before choosing a thesis topic. Students may work with one or more research supervisors during the term.

CHEM 7820G Introduction to Laboratory Research

90 hours laboratory; 3 credits
For students who want to explore the feasibility of different research problems before choosing a thesis topic. Students may work with one or more research supervisors during the term.

CHEM 7830G Introduction to Laboratory Research

120 hours laboratory; 4 credits
For students who want to explore the feasibility of different research problems before choosing a thesis topic. Students may work with one or more research supervisors during the term.

CHEM 7910G Thesis Research

Minimum of 45 hours laboratory and conference; 2 credits
Research for master's thesis supervised by a faculty member. Credit is not earned until the thesis is accepted. Laboratory hours to be arranged.

CHEM 7920G Thesis Research

Minimum of 45 hours laboratory and conference; 2 credits
Research for master's thesis supervised by a faculty member. Credit is not earned until the thesis is accepted. Laboratory hours to be arranged.

CHEM 7930G Thesis Research

Minimum of 45 hours laboratory and conference; 2 credits
Research for master's thesis supervised by a faculty member. Credit is not earned until the thesis is accepted. Laboratory hours to be arranged.

CHEM 7950T Independent Development of Laboratory Curriculum Materials

90 hours conference and independent work; 2 credits
This course is intended for students enrolled in the M.A. degree program in adolescence education: chemistry teacher. Students will develop a laboratory experiment suitable for a high school or college course in chemistry chosen to satisfy a set of learning objectives identified by the instructor. The student will search the educational

literature to identify good candidate procedures, test and modify procedures to ensure they are suitable for the specific application, and prepare written materials for students and instructors who would be conducting the experiment in a laboratory classroom. The student will also complete a module on laboratory safety.

Prerequisite: Minimum 6 credits in advanced laboratory coursework and permission of the instructor and chairperson.

Childhood, Bilingual and Special Education

Department office: 2105 James Hall
Phone: 718.951.5447

Full-time Faculty

Professors: Rose, Rubal-Lopez
Associate Professors: Kharem, Lee, Morales
Assistant Professors: Ascenzi-Moreno, Dembek, Haydar, Hwu, Kaya, O'Connor-Petruso, Reed

M.S. in Education degree program: childhood education teacher (grades 1-6) - bilingual education HEGIS code 0802.00; SED program code 26823

The program in bilingual childhood education prepares students to teach in English monolingual childhood classrooms as well as childhood classrooms where two languages are used as the mediums of instruction (also known as bilingual classrooms). The program consists of a 36-credit course of study and is intended for persons who have attained or are in the process of acquiring New York State Initial Certification as a teacher. The course of study includes a 15-credit bilingual extension consisting of courses in bilingualism, research, methodology, biliteracy, content instruction and multicultural education. This 15 credit sequence can be taken as an advanced certificate (see Advanced Certificate in Bilingual Education). For those candidates who do not hold any certification as a teacher, an additional 18 credits are required for the degree as well as one semester of student teaching in a bilingual setting.

Matriculation requirements

This program applies to students who hold a New York State Initial Certificate in Childhood Education and wish to attain a Professional Certificate in Childhood Education with an Extension in Bilingual Education. This program also applies to students who have a Professional Certificate in Childhood Education and wish to pursue an Extension in Bilingual Education. All students who wish to enroll should speak to the Bilingual Program Adviser.

Applicants must have a minimum undergraduate grade point average of 3.00.

Applicants must demonstrate proficiency in both English and in a language other than English (the language in which they seek the extension.) Proficiency in the language other than English is determined by the Bilingual Education Assessment (BEA) which is offered by New York State. International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements: Thirty-six credits are required for the degree.

Required courses are listed below; courses marked with an asterisk (*) are bilingual extension courses.

CBSE 7200T paired with CBSE 7351T*.

CBSE 7203T paired with Puerto Rican and Latino Studies 7145X*.

CBSE 7204T paired with Mathematics 7141T or 7142T or 7143T or 7145T or CBSE 7405T.

CBSE 7201T paired with any graduate level course in General Science or 7000-level course in Earth and Environmental Sciences.

CBSE 7202T paired with CBSE 7350T*.

CBSE 7353T* paired with CBSE 7355T*.

During the first semester, students must file a program of study approved by the program adviser. All courses in the childhood education degree sequence and in childhood bilingual extension programs require departmental permission for registration.

Nonmatriculated students

Students with a New York State Initial Certificate in Childhood Education and/or a New York State Professional Certificate in Childhood Education or their equivalents who wish to complete an Extension in Bilingual Education without completing a master's degree in Childhood Education, may do so as a nonmatriculated student. The bilingual extension can be applied to all New York State Certifications including Teachers of Students with Speech and Language Disabilities (TSSLD). Permission from the head of the Program in Bilingual Education is required.

The Bilingual Extension in Childhood Education consists of 15 credits. Required courses, which may be taken in any order, are listed below. This option is applicable for candidates who hold initial certification, except TSSLD students.

CBSE 7350T, 7351T, 7353T, and 7355T; and Puerto Rican and Latino Studies 7145X.

TSSLD students must complete the following course sequence:

CBSE 7350, CBSE 7351, CBSE 7353, SPEC 7535/CBSE 7360, and SPEC 7536/CBSE 7359.

All courses in childhood education and in childhood bilingual extension programs require departmental permission for registration.

M.S. in Education degree program: childhood education teacher (grades 1-6) - liberal arts HEGIS code 0802.00; SED program code 26826

The program in childhood education prepares teachers of children in first through sixth grade for initial and/or professional certification in liberal arts, bilingual education, science and environmental education, and mathematics. Through collaborative action, teaching and research, we develop our students' capacities to create socially just, intellectually vital, aesthetically rich, and compassionate communities that value equity and excellence, access and rigor. We design our programs in cooperation with liberal arts and sciences faculties and in conjunction with local schools in order to provide our students with opportunities to develop the knowledge, proficiencies, and understandings needed to work with New York City's racially, ethnically, and linguistically diverse populations. Our program is unique in that our students become highly skilled in content and methodology courses, adept in diversified literacy skills, and have the ability to integrate pragmatic tools of technology, including free and interactive Web 2.0 tools such as blogs, wikis, and podcasts. Our reflective graduates are astutely aware of the digital divide and the need to use source ware (free software) so no child is left behind in the Information Age, and the need to produce globally competitive students regardless of their socioeconomic status.

Students will enroll in the appropriate course of studies listed below (Option A or B or C) based upon teaching experience, previous course work, and the teaching certificates they hold.

Option (A): 30 credits

The following program applies to students who hold a New York State Initial Certificate in Childhood Education (grades 1-6) or its equivalent. This program leads to a New York State Professional Certificate in Childhood Education (grades 1-6).

Matriculation requirements:

Applicants must hold a New York State Initial Certificate in Childhood Education (grades 1-6) or its equivalent.
Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.
International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements: Thirty credits are required for the degree.

CBSE 7200T and English 7602X or 7701X or 7502X or 7503X.
CBSE 7203T and History 7110X or 7430X or Political Science 7030X or 7610X or Puerto Rican and Latino Studies 7415X or 7420X or Africana Studies 7020X or 7030X.
CBSE 7204T and Mathematics 7141T or 7142T or 7143T or 7145T or CBSE 7405T.
CBSE 7201T and any graduate level course in General Science or 7000-level course in Earth and Environmental Sciences.
CBSE 7202T and an elective in education: CBSE 7207X or 7360X or 7671X or a course in teaching students with disabilities with permission of the head of the Program in Teaching Students with Disabilities and the head of the Program in Childhood Education: Liberal Arts.
The following courses are required and it is recommended that they be taken in the following order (see the list above):
CBSE 7200T and a course in English; CBSE 7203T and a course in history or political science or Puerto Rican and Latino studies or Africana studies; CBSE 7204T and a course in mathematics or CBSE 7405T; CBSE 7201T; any graduate level course in General Science or 7000-level course in Earth and Environmental Science.

During the first semester, students must file a program of study approved by the program adviser. All courses in the childhood education degree sequence require departmental permission for registration.

Option (B): 33 credits

The following program applies to students who hold a New York State Initial Certificate in Early Childhood Education (birth through grade 2) or its equivalent or a New York State Initial Certificate in Special Subjects (all grades) or its equivalent. This program leads to a New York State Professional Certificate in Childhood Education (grades 1-6).

Matriculation requirements:

Applicants must hold a New York State Initial Certificate in Early Childhood Education (birth through grade 2) or its equivalent or a New York State Initial Certificate in Special Subjects (all grades) or its equivalent.
Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.
International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements: Thirty-three credits are required for the degree.

CBSE 7200T and English 7602X or 7701X or 7502X or 7503X.
CBSE 7203T and History 7110X or 7430X or Political Science 7030X or 7610X or Puerto Rican and Latino Studies 7415X or 7420X or Africana Studies 7020X or 7030X.
CBSE 7204T and Mathematics 7141T or 7142T or 7143T or 7145T or CBSE 7405T.
CBSE 7201T and any graduate level course in General Science or 7000-level course in Earth and Environmental Sciences.
CBSE 7202T and an elective in education: CBSE 7671X.
CBSE 7214T.

During the first semester, students must file a program of study approved by the program adviser. All courses in the childhood education degree sequence require departmental permission for registration.

Option (C): 45 credits

The following program applies to students who do not hold a New York State Initial Certificate in Early Childhood Education or Childhood Education or Special Subjects or equivalent course work and teaching experience, or who are teaching but do not hold initial certification. This program leads to both New York State Initial and Professional Certificates in Childhood Education (grades 1-6).

Matriculation requirements:

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.
International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.
Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements: Forty-five credits are required for the degree.

CBSE 7205T, 7216X, 7440T, 7213T, 7671X, and 7471T.
CBSE 7200T and English 7602X or 7701X or 7502X or 7503X.
CBSE 7203T and History 7110X or 7430X or Political Science 7030X or 7610X or Puerto Rican and Latino Studies 7415X or 7420X or Africana Studies 7020X or 7030X.
CBSE 7204T and Mathematics 7141T or 7142T or 7143T or 7145T or CBSE 7405T.
CBSE 7201T and any graduate level course in General Science or 7000-level course in Earth and Environmental Sciences or CBSE 7202T.

During the first semester, students must file a program of study approved by the program adviser. All courses in the childhood education degree sequence require departmental permission for registration.

M.S. in Education degree program: childhood education teacher (grades 1-6) - mathematics
HEGIS code 0802.00; SED program code 26826

The program in childhood education prepares teachers of children in first through sixth grade for initial and/or professional certification in liberal arts, bilingual education, science and environmental education, and mathematics. Through collaborative action, teaching and research, we develop our students' capacities to create socially just, intellectually vital, aesthetically rich, and compassionate communities that value equity and excellence, access and rigor. We design our programs in cooperation with liberal arts and sciences faculties and in conjunction with local schools in order to provide our students with opportunities to develop the knowledge, proficiencies, and understandings needed to work with New York City's racially, ethnically, and linguistically diverse populations.

Our program is unique in that our students become highly skilled in content and methodology courses, adept in diversified literacy skills, and have the ability to integrate pragmatic tools of technology, including free and interactive Web 2.0 tools such as blogs, wikis, and podcasts. Our reflective graduates are astutely aware of the digital divide and the need to use source ware (free software) so no child is left behind in the Information Age, and the need to produce globally competitive students regardless of their socioeconomic status.

This program leads to the M.S. in Education and a New York State Professional Certificate in Childhood Education (grades 1-6) with a specialization in mathematics education.

General matriculation requirements

Applicants must have a minimum of 6 credits in mathematics.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

General degree requirements: Thirty to 45 credits are required for the degree depending on applicants' qualifications.

Students will enroll in the appropriate course of studies listed below (Option A or B or C) based upon teaching experience, previous course work, and the teaching certificates they hold.

Students must complete the following education courses in the stated sequence: CBSE 7400T, 7401T, 7402T, 7403T. All required education courses and some education electives require permission for registration as indicated in the Schedule of Classes.

Option (A): 30 credits

Matriculation requirements

Applicants must hold a New York State Initial Certificate in Childhood Education (grades 1-6) or its equivalent.

Degree requirements: Thirty credits are required for the degree.

In addition to CBSE 7400T, 7401T, 7402T, and 7403T, the following courses are required:
(a) four of the following mathematics courses, or mathematics courses approved by the program adviser: Mathematics 7141T, 7142T, 7143T, 7144T, 7145T, 7146T;
(b) CBSE 7215X;
(c) one of the following elective education courses, or an education course approved by the program adviser: CBSE 7451X, 7671X, 7672X, 7207X, 7019T, 7684T, 7472X, 7545X, 7220X.

Option (B): 33 credits

Matriculation requirements

Applicants must hold a New York State Initial Certificate in Early Childhood Education (birth through grade 2) or its equivalent or a New York State Initial Certificate in Middle Childhood Education (generalist, grades 5-9) or its equivalent.

Degree requirements: Thirty-three credits are required for the degree.

In addition to CBSE 7400T, 7401T, 7402T, and 7403T, the following courses are required:

(a) four of the following mathematics courses, or mathematics courses approved by the program adviser: Mathematics 7141T, 7142T, 7143T, 7144T, 7145T, 7146T;
(b) CBSE 7215X;
(c) one of the following elective education courses, or an education course approved by the program adviser: CBSE 7451X, 7671X, 7672T, 7207X, 7019T, 7684T, 7472X, 7545X, 7503X;
(d) CBSE 7214T.

Option (C): 45 credits

This option leads to both New York State Initial and Professional Certificates in Childhood Education (grades 1-6) with a specialization in mathematics education.

Matriculation requirements

See "General matriculation requirements" for Childhood Education: Mathematics, above.

Degree requirements: Forty-five credits are required for the degree.

Students must complete CBSE 7205T, 7216X, 7440T, 7213T, and 7471T prior to taking other education courses required for the degree. Students must obtain departmental permission to register for these courses.
In addition to CBSE 7400T, 7401T, 7402T, and 7403T, the following courses are required:
(a) four of the following mathematics courses, or mathematics courses approved by the program adviser: Mathematics 7141T, 7142T, 7143T, 7144T, 7145T, 7146T;
(b) CBSE 7215X;
(c) one of the following elective education courses, or an education course approved by the program adviser: CBSE 7451X, 7671X, 7672T, 7207X, 7019T, 7684T, 7545X, 7503X.

M.S. in Education degree program: childhood education teacher (grades 1-6) - science and environmental education
HEGIS code 0802.00; SED program code 26826

The program in childhood education prepares teachers of children in first through sixth grade for initial and/or professional certification in liberal arts, bilingual education, science and environmental education, and mathematics. Through collaborative action, teaching and research, we develop our students' capacities to create socially just, intellectually vital, aesthetically rich, and compassionate communities that value equity and excellence, access and rigor. We design our programs in cooperation with liberal arts and sciences faculties and in conjunction with local schools in order to provide our students with opportunities to develop the knowledge, proficiencies, and understandings needed to work with New York City's racially, ethnically, and linguistically diverse populations. Our program is unique in that our students become highly skilled in content and methodology courses, adept in diversified literacy skills, and have the ability to integrate pragmatic tools of technology, including free and interactive Web 2.0 tools such as blogs, wikis, and podcasts. Our reflective graduates are astutely aware of the digital divide and the need to use source ware (free software) so no child is left behind in the Information Age, and the need to produce globally competitive students regardless of their socioeconomic status.

Students will enroll in the appropriate course of studies listed below (Option A or B or C) based upon teaching experience, previous course work, and the teaching certificates they hold.

Option (A): 30 credits

The following program applies to students who hold a New York State Initial Certificate in Childhood Education (grades 1-6) or its equivalent. This program leads to a New York State Professional Certificate in Childhood Education (grades 1-6).

Matriculation requirements:

Applicants must hold a New York State Initial Certificate in Childhood Education (grades 1-6) or its equivalent.

Applicants must have a minimum undergraduate grade point average of 3.00 and a minimum grade point average of 3.00 in courses required for matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 650 on the paper-based test or 280 on the computer-based test or 114 on the internet-based test before being considered for admission.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the program head.

A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation. Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements: Thirty credits are required for the degree.

Students must complete the following five courses in the stated sequence: CBSE 7300T and General Science 7030T; CBSE 7301T; CBSE 7320T; CBSE 7321T.

The following courses are also required:

Two of the following:
Any 6000 or 7000-level course in General Science, Biology, Chemistry, Earth and Environmental Sciences or Physics;

CBSE 7215X; 7671X, 7672T, 7674T or a course in teaching students with disabilities;

An education or science elective.

During the first semester, students must file a program of study approved by the program adviser. All courses in the childhood education degree sequence require departmental approval for registration.

Option (B): 33 credits

The following program applies to students who hold a New York State Initial Certificate in Early Childhood Education (birth through grade 2) or its equivalent, a New York State Initial Certificate in Middle Childhood Education (grades 5-9) or its equivalent, or a New York State Initial Certificate in Special Subjects (all grades) or its equivalent. This program leads to a New York State Professional Certificate in Childhood Education (grades 1-6).

Matriculation requirements:

Students must hold a New York State Initial Certificate in Early Childhood Education (birth through grade 2) or its equivalent, a New York State Initial Certificate in Middle Childhood Education (grades 5-9) or its equivalent, or a New York State Initial Certificate in Special Subjects (all grades) or its equivalent.

Applicants must have a minimum undergraduate grade point average of 3.00.
International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 650 on the paper -based test or 280 on the computer-based test or 114 on the internet-based test before being considered for admission.

A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements: Thirty-three credits are required for the degree.

Students must complete the following five courses in the stated sequence: CBSE 7300T and General Science 7030T; CBSE 7301T; CBSE 7320T;

CBSE 7321T.

The following courses are also required:

Two of the following:
Any 6000 or 7000-level course in General Science, Biology, Chemistry, Earth and Environmental Sciences or Physics;

CBSE 7214T; 7215X;

CBSE 7671X, 7672T, 7674T, or a course in teaching students with disabilities;

An education or science elective.

During the first semester, students must file a program of study approved by the program adviser. All courses in the childhood education degree sequence require departmental permission for registration.

Option (C): 39 credits

The following program applies to students who do not hold a New York State Initial Certificate in Early Childhood Education, Childhood Education, Middle Childhood Education, or Special Subjects or equivalent course work and teaching experience, or who are teaching but do not hold initial certification. This program leads to both New York State Initial and Professional Certificates in Childhood Education (grades 1-6).

Matriculation requirements:

Applicants must have a minimum undergraduate grade point average of 3.00.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 650 on the paper-based test or 280 on the computer-based test or 114 on the internet-based test, before being considered for admission.

A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements: Thirty-nine credits are required for the degree.

Students must complete the following three courses: CBSE 7205T; 7216X; 7440T.

Students must complete the following five courses in the stated sequence: CBSE 7300T and General Science 7030T; CBSE 7301T; 7471T; 7320T; 7321T.

Two of the following:
Any 6000- or 7000-level course in General Science, Biology, Chemistry, Earth and Environmental Sciences, or Physics;

CBSE 7671X, 7672T, 7674T, or a course in teaching students with disabilities;

An education or science elective.

During the first semester, students must file a program of study approved by the program adviser. All courses in the childhood education degree sequence require departmental permission for registration.

M.S. in Education degree program: teacher of students with disabilities generalist (grades 7-12) HEGIS code 0808; SED program code 31136

Matriculation requirements

Applicants must present a minimum undergraduate scholastic index of 3.0. A minimum grade point average of 3.0 in graduate education courses is required to maintain matriculation. International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 650 on the paper-based test, or 280 on the computer-based test, or 114 on the Internet-based test, before being considered for graduate studies.

Applicants must qualify for a New York State Transitional B Certificate as a Teacher of Students with Disabilities Generalist (7-12). Students who do

not possess Transitional B Alternative Certification Certificates or who have Transitional B Alternative Certificates but who are not employed as teachers will be required to complete six credits of student teaching.

Applicants must present evidence of six credits of prior upper division undergraduate or graduate work in each of four areas: humanities, including English; social sciences; mathematics; physical and/or life sciences.

Applicants are required to demonstrate written proficiency in English and must submit three appropriate letters of recommendation.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admissions" and "Academic Regulations and Procedures" in the Graduate Bulletin.

Thirty-three credits are required for the degree.

33 credits in the following courses:
Students must complete 21 credits in the following education courses: CBSE 7674T, 7676T, 7678T,7664T, 7657T, 7659T, 7503; and 12 credits in graduate liberal arts and sciences courses, to be approved by the program head.
In addition, students must complete a research project under advisement of a faculty member in Education - CBSE 7657T.

M.S. in Education degree program: teacher of students with disabilities in childhood education (grades 1-6) HEGIS code 0808; SED program code 26729

The graduate program in special education prepares candidates to work in schools and other educational settings that serve individuals with disabilities and their families. Candidates are provided experiences in varied educational settings that prepare them to work in culturally diverse urban school settings. A range of 30-45 credits is required. The number of credits and their sequence are determined by the candidate's previous teacher preparation.

Applicants are admitted to this program in the spring and fall semesters. Applications for the spring semester must be received by November 1 and applications for the fall semester must be received by March 1.

Matriculation requirements

Applicants must obtain and file an application form in the program office in addition to the regular college admissions form. Applicants are interviewed and must submit three appropriate letters of recommendation.

Applicants must present a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate education courses is required to maintain matriculation. International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 650 on the paper-based test or 280 on the computer-based test or 114 on the internet-based test before being considered for admission.

Applicants who do not meet these standards may be considered for admission based on other evidence of high capacity for graduate studies.

Applicants must have successfully completed a New York State Initial Certificate in one of the following New York State approved teacher certification areas:
a) early childhood education,
b) childhood education,
c) special certification; or have a baccalaureate degree in a liberal arts and sciences major, or 36 credits in a liberal arts and sciences concentration and demonstrated undergraduate preparation in English, science, mathematics, the social sciences and foreign language or qualify for a New York State Transitional B Certificate as a Teacher of Students with Disabilities in Childhood Education.

Applicants are required to demonstrate written proficiency in English.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures."

Degree requirements

Thirty or 33 or 33 to 45 credits are required for the degree; there are now two additional options of 39 and 44 credits. The course of study and credit options are determined by previous course work, teaching experience, and the certificates they hold.

During the first term students in all options (30, 33, or 33 to 45 credits) must file a program of study approved by the head of the Program in Teaching Students with Disabilities in Early Childhood and Childhood Education.

Option A: 30 credits

This option is for students holding an Initial Certificate in one of the New York State approved teacher certification areas and an Initial Certificate in Teaching Students with Disabilities.

Students complete 15 credits in the following courses: CBSE 7676T, 7677T, 7679T, 7680T, and 7657T; and 6 credits in elective courses in teaching students with disabilities. The remaining 9 credits consist of CBSE 7405T, or 7440T or 7693T, 7203T or 7205 and 7300T or 7305T with approval from program heads of the Programs in Childhood Education: Liberal Arts, Childhood Education: Science and Environmental Education, and Childhood Education: Mathematics.

Students are required to complete an independent research project under advisement of a faculty member in CBSE 7657T).

Option B: 33 credits

This option is for students holding an Initial Certificate in one of the New York State approved teacher certification areas, without student teaching experience and without certification in students with disabilities in grades 1-6.

Students must complete 33 credits in the following sequenced courses, which should be taken in this order: CBSE 7674T and 7672T; 7676T and 7678T; 7679T and 7664T; 7677T and 7680T; 7675T and 7657T; and CBSE 7681T, Seminar and Student Teaching: Students with Special Needs.

Students must complete at least 50 hours of supervised field experience and at least 20 days of student teaching (teaching students with disabilities in childhood). In addition, students must complete a research project under advisement of a faculty member in CBSE 7657T.

Option C: 33-45 credits

This option is for students who have a baccalaureate degree in a liberal arts and sciences major, or 36 credits in a liberal arts and sciences concentration and demonstrated undergraduate preparation in English, science, mathematics, the social sciences, and foreign language, and do not possess Initial Certification in any teacher certification area.

Students must complete 33 to 45 credits in the following courses: CBSE 7205T, 7679T, 7440T, 7213T, 7214T, 7674T, 7672T, 7676T, 7678T, 7664T, 7677T, 7680T, 7675T, 7657T, and CBSE 7681T Seminar and Student Teaching: Students with Special Needs.

Students must complete at least 100 hours of supervised field experience and at least 40 days of student teaching. In addition students must complete a research project under advisement of a faculty member in CBSE 7657T.

Option D: 30 credits

This option is for students who have a baccalaureate degree in a liberal arts and sciences major, or 36 credits in a liberal arts and sciences concentration and demonstrated undergraduate preparation in English, science, mathematics, the social sciences, and foreign language who are teaching or have secured a position teaching students with special needs and qualify for New York State Alternative Certification as a Teacher of Students with Disabilities in Childhood Education or holding such certification. Students should take the following courses: CBSE 7653T, 7657T, 7659T, 7664T, 7674T, 7676T, 7677T, 7678T, 7679T, and SEED 7503. Students will also be required to register for four terms of SEED 6002, the course which provides for onsite supervision, as required for NYS Transitional B Certificate holders.

This option is consigned to students sponsored by entities such as the New York City Teaching Fellows program. In addition, students must complete a research project under advisement of a faculty member in CBSE 7657T. Students may qualify for additional certification in Childhood 1-6 with additional courses in Childhood teaching methods. See advisor for information.

Option E: 44 credits

This option is for students who have a baccalaureate degree in a liberal arts and sciences major, or 36 credits in a liberal arts and sciences concentration and demonstrated undergraduate preparation in English, science, mathematics, the social sciences, and foreign language who are teaching or have secured a position teaching students with special needs and qualify for New York State Alternative Certification as a Teacher of Students with Disabilities in Childhood Education or holding such certification. Students should take the following courses in the recommended order: CBSE 7653T, 7674T, 7679T, 7440T, 7672T, 7205T, 7213T, 7676T, 7677T, 7678T, 7680T, 7657T, 7664T and 7695T, 7696T, 7697T, and 7698T Inclusive Teaching Practicum.

In addition, students must complete a research project under advisement of a faculty member in CBSE 7657T.

M.S. in Education degree program: teacher of students with disabilities in early childhood education (birth-grade 2)
HEGIS code 0808; SED program code 26726

The graduate program in special education prepares candidates to work in schools and other educational settings that serve individuals with disabilities and their families. Candidates are provided experiences in varied educational settings that prepare them to work in culturally diverse

urban school settings. A range of 30-45 credits is required. The number of credits and their sequence are determined by the candidate's previous teacher preparation.

Applicants are admitted to this program in the spring and fall semesters. Applications for the spring semester must be received by November 1 and applications for the fall semester must be received by March 1.

Matriculation requirements

Applicants must obtain and file an application form in the program office in addition to the regular college admissions form. Applicants are interviewed and must submit three appropriate letters of recommendation.

Applicants must present a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate education courses is required to maintain matriculation. International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Applicants who do not meet these standards may be considered for admission based on other evidence of high capacity for graduate studies.

Applicants must have successfully completed a New York State Initial Certificate in one of the following New York State approved teacher certification areas:
a) early childhood education,
b) childhood education,
c) middle childhood education,
d) adolescence education,
e) special subjects, or
f) teacher of students with speech and language disabilities, or the equivalent preparation and/or certification.

Applicants are interviewed and required to demonstrate written proficiency in English.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures."

Degree requirements

Thirty or 33 credits are required for the degree. Students take different education courses and credit options depending on their previous course work, teaching experience, and the certificates they hold.
During the first term students in either option (30 or 33 credits) must file a program of study approved by the head of the Program in Teaching Students with Disabilities in Early Childhood and Childhood Education.
- Thirty credit option:
This option is for students holding an Initial Certificate in one of the New York State approved teacher certification areas and an Initial Certificate in Teaching Students with Disabilities.
Students complete 15 credits in the following courses: ECAE 7115, ECAE 7104T or CBSE 7665T, CBSE 7113T, 7680T, and 7656T; and 6 credits in elective courses in teaching students with disabilities. The remaining 9 credits consist of ECAE 7108T, 7109T, and 7116T with approval from program heads of the Program in Early Childhood Education. Students are required to complete an independent research project under advisement of a faculty member in CBSE 7656T.
- Thirty-three credit option:
This option is for students holding an Initial Certificate in one of the New York State approved teacher certification areas, and having had no course work in teaching students with disabilities and no student teaching experience with students with disabilities in Birth - Grade 2.
Students must complete 33 credits in the following courses, which should be taken in this order: CBSE 7674T and 7672T; CBSE 7665T or ECAE 7104T and ECAE 7115T; CBSE 7113T and 7663T; 7678T and 7680T; 7675T and 7656T; and CBSE 7681T, Seminar and Student Teaching: Students with Special Needs.
Students must complete at least 50 hours of supervised field experience and at least 20 days of student teaching (teaching students with disabilities in early childhood). In addition, students must complete a research project under advisement of a faculty member in CBSE 7656.

Advanced certificate in bilingual education
HEGIS code 0899; SED program code 31826

This advanced certificate provides a New York State Bilingual Extension for graduate students who already possess an initial or professional certificate. This program of study prepares candidates to teach in bilingual settings where two languages are used as the mediums of instruction. The advanced certificate provides candidates with a solid foundation in the theory and practice of bilingual education; courses include the following topics: bilingualism, research, methodology, biliteracy, content instruction in bilingual settings and multicultural education.

Applicants must have a minimum undergraduate grade point average of 3.00.

Applicants must demonstrate proficiency in both English and in a language other than English (the language in which they seek the extension). Proficiency of the language other than English is determined by the Bilingual Education Assessment (BEA) which is offered by New York State. International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score

of 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Degree requirements: Fifteen credits are required for the degree.

The Bilingual Extension consists of 15 credits. Required courses, which may be taken in any order, are listed below. This sequence of courses is applicable for candidates who already possess a certificate, except Teachers of Students with Speech and Language Disabilities (TSSLD) students.

7350T, 7351T, 7353T, and 7355T; and Puerto Rican and Latino Studies 7145X.
TSSLD students must complete the following sequence of courses:
CBSE 7350T, 7351T, 7353T, SPEC 7535/CBSE 7360, and SPEC 7536/CBSE 7359.

All courses in the childhood bilingual education programs require departmental permission for registration.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Advanced certificate program in autism spectrum disorders
HEGIS code 0808; SED program code 31638

With the prevalence of autism increasing in recent years from 1 in 1000 to 1 in 88*, learning to work with children with autism spectrum disorders has become important to professionals in many fields, including:
Speech-language pathology
Psychology
Education
Occupational Therapy
Physical Therapy

Skills in working with children on the spectrum are critical not only to people already in these fields, but also to those seeking to enter these fields.

The Brooklyn College advanced certificate program in Autism Spectrum Disorders created the first program in New York that has a cross-paradigm perspective where students learn about the strengths and weaknesses of the many different approaches that are available for children on the spectrum and learn with those from different fields and disciplines. Students can also learn about the latest in augmentative communication at the campus's assistive technology center.

The 15-credit ASD certificate is for students with either bachelor's or master's degrees. It can be completed in one year (fall, spring, and summer), and can be applied towards continuing education credits and salary increments in the Department of Education. Classes are scheduled in the evening for the convenience of working professionals.

The coursework and practicum opportunities will reflect a range of approaches available for children on the autistic spectrum, including applied behavioral analysis, both discrete trials and natural learning paradigms, and developmental social-pragmatic approaches. Students will participate in lecture, discussion, observation, and practice, incorporating a range of philosophical, educational, and clinical paradigms. Students from varying disciplines, including education, speech-language pathology, school psychology, and occupational and physical therapy will have the opportunity to train and work collaboratively with future colleagues.

*Centers for Disease Control and Prevention, 2012

Program description

Provides interdisciplinary foundational and advanced knowledge in the area of autism spectrum disorders incorporating a range of philosophical, educational, and clinical paradigms, including applied behavioral analysis, discrete trials and natural learning paradigms, and developmental social-pragmatic approaches.

Matriculation requirements

Applicants must have completed an undergraduate or graduate degree in special education, speech-language pathology, or a related field. Applicants must present coursework in language acquisition and child development. Additional coursework may be required to meet any matriculation deficiency.

An applicant must have earned a baccalaureate degree with a grade point average of at least 3.0 in the undergraduate major, and a minimum overall grade point average of 3.0.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Advanced certificate requirements (15 credits)

Fifteen credits of coursework completed with a grade point average of B or better are required for the advanced certificate. No more than one

course with a grade below B may be offered toward the completion of the certificate requirements. Students must complete all of the following courses:

- Speech 7317X/CBSE 7685T: An Introduction to Autism Spectrum Disorders
- Speech 7319X/CBSE 7686T: Speech, Language, and Communication Development of Children on the Autistic Spectrum
- CBSE 7666T/Speech 7316X: Special Issues in Education: Classroom and School-wide Learning Environments
- CBSE 7677T/Speech 7320X: Curriculum Modifications for Teaching Students with Special Needs
- CBSE 7681T/Speech 7394X: Seminar and Student Teaching: Students with Special Needs.

Courses

CBSE 6000X Experiencing Education: Individuals and Communities
45 hours; 3 credits
Comparative analysis of individual experience and social expectations of schooling and higher education in the United States and other countries; autobiographical, descriptive, and critical accounts; comparative readings in history and philosophy of education; contemporary issues and daily life in schools.

Prerequisite: permission of the coordinator for secondary education.

CBSE 6001X Skillful Teaching: Strategies for Effective Instruction and Classroom Management
45 hours; 3 credits
Strategies to assist the in-service teacher in the application of principles of teaching that contribute to student achievement and appropriate student behavior, using the resources of the school and community.

CBSE 6002T Issues and Strategies in Education
15 hours each term; 1 credit each term.
Timely issues, strategies, and techniques of modern educational practice. Course content varies from term to term. This course is not creditable toward the degrees in education.

Prerequisite: license or certificate to serve as teacher, paraprofessional, or supervisor in day care center, kindergarten, or elementary or secondary school.

CBSE 6003T Issues and Strategies in Education
15 hours each term; 1 credit each term.
Timely issues, strategies, and techniques of modern educational practice. Course content varies from term to term. This course is not creditable toward the degrees in education.

CBSE 6200X Schools and Communities: The Societal Context of Schooling and the Teaching of Social Studies
30 hours lecture, 30 hours laboratory; 3 credits
Examination of the historical, philosophical, social, political, and cultural contexts of schooling and the roles of schools in a multicultural urban setting. Making the insights of history and the social sciences accessible to children through the social studies curriculum. Strategies for promoting active learning of historical and social science knowledge, processes, and understandings in children in grades PreK-6.

Prerequisite: permission of the department.

CBSE 6201X Introduction to Literacy and the Reading/Writing Process
30 hours lecture, 30 hours laboratory; 3 credits
Approaches to teaching reading/writing; perspectives from theories of psycholinguistics; emergent literacy in the pre-school years; methods and materials for teaching reading/writing as integrated processes in grades K-6; integration with content area subjects; adaptation to meet special needs of children; assessment; supervised field experiences with children. (Not open to students who are enrolled in or have completed Childhood and Special Education 7023T.)

Prerequisite: a course in literature.

CBSE 6202X Teaching Mathematics in the Elementary School
30 hours lecture, 30 hours laboratory; 3 credits
Approaches to teaching mathematics; perspectives from theories of cognitive development; methods and materials for teaching key concepts, skills, and thinking processes in mathematics, grades PreK-6; analysis of curricula; integration of mathematics with other subject areas; adaptation of instruction to meet special needs of students; assessment; supervised field experiences with children.

Prerequisite: Mathematics *1401 or a 3-credit mathematics course.

CBSE 6203X Models of Teaching Science in the Elementary Classroom
30 hours lecture, 30 hours laboratory, including field experience; 3 credits
Exploration of effective teaching practices in science; analysis of the connections among curriculum, instruction, and assessment of elementary and early childhood science. Science as a way of knowing the world and a tool for problem solving. Examination and evaluation of cognitive and affective foundations of materials from national curriculum projects; methods and materials for teaching key concepts, skills, and thinking processes in science, grades PreK-6. Integration of science with other subject areas; adaptation of instruction and assessment to meet special needs of students. Issues of gender bias in science teaching. Supervised field experience.

Prerequisite: a 3-credit science course.

CBSE 6204X Integrated Teaching Methods and Student Teaching in Elementary and Early Childhood Grades
30 hours seminar, 240 hours student teaching; 6 credits
Instructional methods for integrating the teaching of communication arts, social studies, science, and mathematics in the elementary and early childhood grades. Development and analysis of curricular materials for urban children of varying cultural backgrounds. Application of the principles of teaching to all aspects of the curriculum. Instructor's approval for site and schedule of hours required.

Prerequisite: Completion of methods courses in communication arts, social studies, science, and mathematics.

CBSE 7001T Introduction to Foundations of Literacy Instruction
45 hours; 3 credits
Concepts and discourses in educational foundations of literacy. Study of the teacher's role, focus on interactions of people and environments in an educational setting. Topics in educational foundations provide concepts for examining teacher and pupil diversity and teacher role. History of literacies, study of literacy instruction and relationship to diverse students; literacy as related to interdisciplinary curriculum.

Organizing and teaching of the language arts in the childhood classroom.

Corequisite: Childhood and Special Education 7380T.

CBSE 7003T Historic Innovations in Educational Method and Curriculum
30 hours plus independent work; 3 credits
Critical study of major historical developments in educational method and curriculum. Conditions and motivations that relate to curriculum change and development of method.

CBSE 7004T Education and Culture in the United States

45 hours; 3 credits
Analysis of the implication for education of major cultural developments in the United States today. Actual and potential role of the school considered from cultural perspectives.

CBSE 7005X Educational Programs and Practices in Comparative Perspective
30 hours plus independent work and conference; 3 credits
Comparative analysis of curriculum practices and teaching methods in selected countries. Innovations, experiments, and other aspects of special interest. Evaluation of foreign educational research. Trends in the international coordination of school curricula.

CBSE 7006X International Dimensions in American School Curricula
30 hours plus independent work and conference; 3 credits
Analysis of the effectiveness of school programs, practices, and materials in developing bases for international understanding. Emphasis on problems of nationalism, ethnocentrism, and prejudice. Analysis and use of community resources for international features of the curriculum.

CBSE 7007T Learning Theory and the Education Process

45 hours; 3 credits
Critical exposition, in light of recent research, of present developments in learning theory and their import for education. Examination of the psychological approach to such representative educational problems as drill, rewards, punishment, meaning, organization, motivation, programmed learning.

Prerequisite: a course in educational psychology and a course in child or adolescent psychology and a course in an additional area of psychology.

CBSE 7008T Education and Theories of Mind

30 hours plus independent work; 3 credits
Logic of learning (believing, knowing, thinking, understanding). Analysis of the concept of learning in educational theory and practice. Implications of the philosophy of mind for the evaluation of teaching and learning.

CBSE 7009T Programmed Instruction

30 hours plus conference and independent work; 3 credits
Critical evaluation of the theories underlying programmed instruction. Examination of research findings concerning the effectiveness of teaching machines, programmed texts, and related devices. Practice in the preparation of programmed materials.

CBSE 7010X The Use and Interpretation of Intelligence, Diagnostic, and Aptitude Tests
30 hours lecture plus independent projects and conferences; 3 credits
Evaluation of tests commonly used for measurement of intelligence, personality, achievement, individual interests, and special aptitudes. Study of procedures for construction, selection, and interpretation of standardized testing materials and of computer-referenced testing are considered in relation to needs of members of the class. Class and individual student projects appropriate to subject specialization of students.

Prerequisite or corequisite: a course in student teaching.

CBSE 7011X Measurement and Evaluation in Teaching

30 hours lecture plus independent projects and conferences; 3 credits
Applied course designed for teachers, and subject and curriculum specialists. Participants plan, develop, try out, and evaluate procedures for assessing student performance. Procedures covered include criterion-referenced tests, formative and summative evaluation techniques, evaluation through the curriculum, and applications of microcomputers to classroom assessment. Class and individual projects appropriate to subject specialization of students.

CBSE 7013X Mental Hygiene and Behavior Problems

45 hours; 3 credits
Contributions of mental hygiene to understanding dynamics of behavior. Dynamic aspects of personality development. Typical behavior problems in school, home, and community. Clinical methods in diagnosing and treating personality difficulties. Study and evaluation of typical case materials. Teacher's role in dealing with behavior problems.

CBSE 7015T Language Structure and Development in the Middle and Secondary School and Their Relationship to Literacy
45 hours lecture; 3 credits
Analysis of recent research findings in the development and use of verbal and nonverbal communication skills. A study of the structure of the English language with particular attention to concept development and figurative language. Study of the effects of dialect, second language learning, and language disabilities on the reading, writing, speaking, and listening skills of students in grades 5 through 12.

CBSE 7017T Contemporary Thought and Education

30 hours plus independent work; 3 credits
Original source materials are used to develop a philosophical perspective characteristic of the twentieth-century mind that bears on educational theory and practice.

CBSE 7018T Sexism in American Education

45 hours; 3 credits
Nonsexist child rearing; sex stereotyping and personal development; child-rearing practices; societal attitudes toward men and women; the role of the media and linguistic sexism. The schools and sex roles, "Hidden Curriculum"; courses, books, materials and toys, resources for nonsexist education. Nonsexist career preparation and educational leadership; creating options, nonsexist counseling; role of community centers and women's groups; anatomy of change; legislation; feminist studies for men and women.

CBSE 7019T Moral Development and Moral Education

45 hours; 3 credits

Cognitive development and moral development; perspective taking, social development and delinquency; moral development and guidance; presocial behavior: altruism, caring, kindness; fostering moral growth in classrooms: science, literature, social studies; children's rights and moral education.

CBSE 7021T Diagnosis and Correction of Reading Difficulties
45 hours; 3 credits
Symptoms and causes of reading disabilities. Use and interpretation of achievement tests, diagnostic instruments, and alternative assessments. Materials and methods of remedial instruction. Preparation of teacher-made reading materials. Work with children and case studies.

Prerequisite or corequisite: Employment or certification as a teacher and Childhood and Special Education 7023T or its equivalent.

CBSE 7023T Principles and Emerging Practices in Reading Instruction in the Elementary School
30 hours plus independent reading and fieldwork; 3 credits
Study and assessment of current research and experimentation in reading instruction. New developments in principles of learning, compilation and use of materials, group and individual work, the use of programmed materials and self-instructional devices, and techniques of teaching and evaluation. Appraisal of representative experimental programs.

Prerequisite: Childhood and Special Education 7043T.

CBSE 7027X Workshop in School Curriculum Development, Experimentation, and Evaluation
45 hours; 3 credits
Investigation of newer practices and experimentation in selected areas of school curriculum. Students are expected to plan and/or implement a practical project applicable to their school situation.

CBSE 7028T Improvement of Teaching: Behavior Modification and Whole-Class Teaching
45 hours; 3 credits
Teaching models and strategies to extend the in-service teacher's conceptual scheme of teaching. Self-analysis systems are explored and applied by means of feedback mechanisms. Practice in behavior modification and whole-class teaching skills.

CBSE 7029T Improvement of Teaching: Open Classroom, Individual, and Small-Group Teaching
45 hours; 3 credits
Continuation of Childhood, Bilingual and Special Education 7028T. Practice with models and strategies applicable to open classroom, individualized, and small-group teaching.

CBSE 7037X Teaching Lexicography and Vocabulary across the Curriculum
30 hours lecture, 30 hours laboratory; 3 credits
Methods and techniques of vocabulary improvement in the classroom setting. Application to classroom practice of the study of the history of the English language, the science of lexicography, and principles of etymology and semantic change. Analysis of selected words and word roots from subject areas taught throughout secondary schools with special emphasis on vocabulary development, the nature of language, and the relationships among languages.

CBSE 7038X Special Topics in Education
45 hours; 3 credits
Selected topics or recent advances in education that reflect current interests, professional needs, and educational problems of teachers and other school personnel. Topics vary from term to term.

Prerequisite: license or certificate to serve as teacher, paraprofessional, or supervisor in day care center, kindergarten, elementary, or secondary school. Additional prerequisites may be required for a specific topic.

CBSE 7039X Special Topics in Education
45 hours; 3 credits
Selected topics or recent advances in education that reflect current interests, professional needs, and educational problems of teachers and other school personnel. Topics vary from term to term.

Prerequisite: License or certificate to serve as teacher, paraprofessional, or supervisor in day care center, kindergarten, elementary, or secondary school. Additional prerequisites may be required for a specific topic.

CBSE 7040X Special Topics in Education
45 hours; 3 credits
Selected topics or recent advances in education that reflect current interests, professional needs, and educational problems of teachers and other school personnel. Topics vary from term to term.

Prerequisite: License or certificate to serve as teacher, paraprofessional, or supervisor in day care center, kindergarten, elementary, or secondary school. Additional prerequisites may be required for a specific topic.

CBSE 7043T Workshop in the Language Arts
45 hours; 3 credits
Problems in teaching language arts: reading and oral and written communication. Attention is given to the particular needs and interests of students, with provision for individual and group study.

CBSE 7101T Child Development in Social, Cultural, and Educational Contexts
30 hours plus conference; 3 credits
Advanced seminar that focuses on childhood development from birth through grade two. Childrearing and early education in diverse cultural contexts, with a focus on urban settings. Theoretical approaches to understanding child development; parental ethnotheories about the structuring of everyday social and educational experiences for the acquisition of culture-specific social and cognitive skills in young children, including English language learners and children with special needs. Culture and early childhood education practice from a comparative perspective; teacher-child and peer relationships; educational policies.

CBSE 7113T Curriculum Modifications for Young Children with Special Needs
45 hours; 3 credits
Special programs, modification of curriculum in the content areas, life skills, teaching strategies and approaches designed to meet the individual and group needs of culturally and linguistically diverse young children with special needs including giftedness, across the developmental spectrum in early education settings. Focus on family, community, and interagency partnerships; appropriate use of technology, including assistive technology; multiple assessment strategies. Field experiences in a variety of schools and community

settings.

CBSE 7117T Theories and Practices in the Study of the Young Child's Progress
30 hours; 2 credits
Experimental development of informal situations in which the progress of individuals and/or groups may be assessed. Use of unstructured media in studying children's feelings and competencies. The place of standardized tests in the evaluation program. Survey of pertinent research and current literature. Practices in planning and carrying through small-scale evaluation projects.

CBSE 7200T Contextualizing Literacy Instruction: Teacher/Learner Interactions
45 hours; 3 credits
Concepts and discourses in educational foundations and human development as related to interdisciplinary curriculum; classroom application in childhood education with focus on literacy. Study of the teacher's role and impact upon diverse student learning; organizing and teaching of the language arts in the childhood classroom. Pedagogical implications of literacies.

Corequisite: An approved graduate course in English.

CBSE 7201T Seminar in Applied Theory and Research I

45 hours plus conference; 3 credits
Concepts and methods of educational theory and research. Application of techniques of research, with focus on classroom research and its impact on student learning, integrating instruction relevant to science inquiry and research technology. Formulation and development of a preliminary research project relevant to teaching and learning in childhood education.

CBSE 7202T Seminar in Applied Theory and Research II

45 hours plus conference; 3 credits
Continuation of Childhood and Special Education 7201T [702.22T]. Implementation of research project relevant to teaching and learning in the childhood education classroom; focus upon current pedagogical inquiry, educational research, and innovative practices related to effective teaching, including issues of technology in education, English language learners and students with special needs.

Prerequisite: Childhood and Special Education 7201T.

CBSE 7203T Advanced Study of Pedagogy and Curriculum in Childhood Education I
45 hours; 3 credits
Development, application, and implementation of curriculum based upon the theories and research findings studied and discussed in childhood education. Focus on advanced techniques of pedagogical practice, including aesthetic education, assessment and use of technology in childhood education, and the development of interdisciplinary curriculum in democratically modeled classrooms. Emphasis on integrating the social sciences into the social studies curriculum.

Corequisite: an approved course in the social sciences.

CBSE 7204T Advanced Study of Pedagogy and Curriculum in Childhood Education II
45 hours; 3 credits
Continuation of Childhood and Special Education 7203T. Development, application, and implementation of curriculum based on the theories and research findings in childhood education. Advanced pedagogical practice and interdisciplinary curriculum development; focus on learning and teaching mathematics in childhood education, including use of technology; English language learners and students with special needs; national, state, and local curriculum standards and guidelines.

Corequisite: an approved course in mathematics or Childhood and Special Education 7405T.

CBSE 7205T Social Discourses in Education: Integrating Social Sciences in Childhood Education
45 hours plus conference, 30 hours field experience; 3 credits
Implications for education of educational, social, historical, and political factors influencing urban schooling and exploration of the role of schools in a multicultural society. Consideration of the implications of the social and cultural contexts of integrating social sciences and humanities into the curriculum. Approaches to teaching, including English language learners and students with special needs. Analysis of recent research in social studies curricula, technology and education, and citizenship education.

CBSE 7206T Childhood and Adolescence in the Urban Community
30 hours plus independent work; 3 credits
Cultural, social, and economic composition of urban communities. Effects of social background on attitudes, behavior, and learning. Implication for guidance, especially in large urban areas. Fieldwork.

CBSE 7207X Multicultural Education

45 hours; 3 credits
Examines diverse cultures, in the broadest sense (race, class, ethnicity, language, and gender), that constitute American society. Similarities and differences of various cultures in the context of education. Examination of curriculum bulletins, textbooks, and journals. Development of materials for use in classrooms.

CBSE 7208T The Teaching of English to Language-Handicapped Children in Primary School
30 hours plus independent work and conference; 3 credits
Specific teaching problems at this level. Application of guiding principles and research findings in linguistics, methodology, psychology, and sociology as applied to the study of English. New media procedures. Evaluative instruments and practices. (Not open to students who are enrolled in or have completed Education 7209T or the equivalent)

CBSE 7209T The Teaching of English to Language-Handicapped Children in Upper Elementary and Early Secondary Grades
30 hours plus independent work and conference; 3 credits
Social, cultural, linguistic, and psychological problems of language-handicapped children. Integrating language learners into the regular classroom at various levels of linguistic development. Application of guiding principles and research to the teaching of English as a second language. Use of new media equipment. Appraisal procedures.

CBSE 7210T Human Relations Problems and Practices in Childhood Education
30 hours; 2 credits
Problems and practices in parent education, inter staff relations, and supervision of students and volunteer workers. Teacher's role in group discussion. Interviews and use of films. Survey of pertinent studies and

current literature.

CBSE 7211T Teaching Literature for Children and Adolescents
30 hours plus independent work and conference; 3 credits
Planning balanced programs of reading, and school and library services. New media equipment and procedures in the use of books to study people and culture, places, science, historical heritage, biography. Interpretation of literature through art media.

Prerequisite: a course in methods and student teaching in early childhood education or elementary education or a course in methods and student teaching in English in secondary education; and a graduate workshop.

CBSE 7213T Teaching and Learning Science in Childhood Education
45 hours plus conference; 30 hours field experience; 3 credits
Introduction to research-validated models of teaching science to all students, including students with special needs and English language learners; classroom management; school-community relationships; individual and collaborative inquiry; reflective practice; analysis of national, state and local learning standards in science and technology; integrating technology into the classroom; developing, implementing and evaluating science curriculum in urban classrooms.

CBSE 7214T Childhood Education: Student Teaching Practicum
30 hours seminar; 150 hours or 20 days of supervised student teaching in Childhood Education grades; 3 credits
Supervised field work in teaching all aspects of the childhood education curriculum. Emphasis on the development of an interdisciplinary approach to teaching children from diverse backgrounds, those who are English language learners, and those with special needs. Integration of instructional technology, interdisciplinary curriculum and topics required by New York State standards in Professional certification.

Prerequisite: Initial Certification in Early Childhood Education or in a Special Subject.

CBSE 7215X Introduction to Technology in Childhood Education
30 hours, 30 hours laboratory; 3 credits
Introduction to educational uses of technology. Definition and development of computer literacy. Evaluation and use of software in reading, writing, science, social studies, and mathematics. Media, calculators, and other instructional tools. The internet as a resource for teaching and learning. Project-based instruction. Roles of technology in classrooms and in relation to school curricula, and the consequent new roles for teachers. Survey of relevant education research.

Prerequisite: 12 credits in education and permission of the program head of Childhood and Special Education: Mathematics.

CBSE 7216X Literacy: Issues and Analysis

45 hours plus conference; 30 hours field experience; 3 credits
Review and analysis of research in the teaching and learning of literacy. Application of reading and writing, learning theories and research findings in teaching children of varying abilities and in interdisciplinary language arts curricula in childhood education. Pedagogy and instructional practices, focus on English language learners and students with special needs; literacy development and learning process; formal and informal assessment.

CBSE 7217T Humane Education

45 hours; 3 credits
Connections between human rights, animal welfare/animal rights and their links to environmental preservation. Develop compassionate, responsible and fair-minded individuals integral to an evolving and just society. Current and emerging national and international concerns for children, families, schools, communities and societies. Focus on critical thinking and ethical decision-making and preventive measures through curriculum development, education, awareness, and advocacy.

CBSE 7300T Methodology in Childhood Science and Environmental Teaching and Learning I
45 hours plus 15 hours conference and fieldwork; 3 credits
Implementation, adaptation, and assessment in practice of research validated science curricula for childhood education. Emphasis on life and environmental science. Approaches to integrating science in teaching and learning language arts, humanities and social sciences; children's science and environmental literature; development of oral and written communication skills in the context of childhood science inquiry. Adapting pedagogy to the needs of English language learners and students with diverse learning styles. Examination of environmental ethics and issues. Field trips will be required.

Corequisite: General Science 7030T.

CBSE 7301T Methodology in Childhood Science and Environmental Teaching and Learning II
45 hours plus 15 hours conference and fieldwork; 3 credits
Continuation of Childhood and Special Education 7300T. Methods of integrating science with math and technology in childhood education with an emphasis on physical and earth science. Developing quantitative and critical thinking skills. Design and assessment of inquiry- and problem-based curriculum integrating mathematics. Adapting methods to the needs of students with disabilities, and students with diverse learning styles. Purposes and types of student assessment. Field trips will be required.

Prerequisite: Childhood and Special Education 7300T.

CBSE 7305T Science Instruction Beyond the Classroom

30 hours lecture, 30 hours field; 3 credits
Designing appropriate learning environments for science in classrooms, schoolyards, and at such nonformal science settings as museums, parks, botanical gardens, and environmental centers. Field experience at nonformal science institutions. Implications for pedagogy and curriculum development.

CBSE 7315X Historical, Philosophical, and Social Foundations of Education and Science
45 hours seminar plus conference ; 3 credits
Historical, philosophical, social and legal foundations of education. History of Western and non-Western science; history of science education. Cultural embeddedness of science; issues in science and science education.

CBSE 7320T Foundations and Analysis of Teaching I

30 hours lecture, 30 hours laboratory; 3 credits
Educational research as applied to analysis of teaching and learning with an emphasis on science and environmental education. Discussion of a range of research methodologies including action research and uses of technology to access and process information in educational research to analyze functioning of teachers in urban schools with children of diverse abilities and backgrounds. Field trips will be required.

CBSE 7321T Seminar in Applied Theory and Research: Science and Environmental Education
30 hours lecture, 30 hours laboratory; 3 credits
Advanced concepts of educational research, including research study design and utilization of results of research. Application of techniques of research, using materials relevant to science and environmental education. Consultation and application in appropriate field settings. Design and implementation of an original research project. Field trips will be required.

CBSE 7350T Bilingual and Multicultural Education

45 hours; 3 credits
Examination of theories of bilingual education and the development of models of bilingual education
within a national and an international context. Multicultural perspectives in education with specific
focus on the similarities and differences found in diverse cultures. Focus on developmental and
educational needs of all emergent bilingual students, including those with special needs.

CBSE 7351T Methods and Research in Teaching English Language Arts to Emergent Bilingual Students
30 hours plus conference, 25 hours supervised field experience; 3 credits
Introduction to methods and research in the teaching of English language arts to all emergent bilingual
students using a variety of techniques and materials. Review of theoretical formulations that have
shaped contemporary understandings of English language learning among linguistic minority students
and those with special needs with an emphasis on effective pedagogical practices for these students within a variety of programmatic settings.

CBSE 7352T Teaching English as a Second Language: The Arts of Expression
45 hours; 3 credits
Introduction to the philosophical ideas underlying first-and second-language acquisition and their application to the arts in the classroom.

CBSE 7353T Biliteracy and Content Instruction

30 hours plus conference, 25 hours supervised field experience; 3 credits
Examination of various methods used for literacy development in both the home language and the new language of emergent bilingual students through content area instruction, in particular social studies. Approaches to integrating the teaching of reading, writing, speaking and listening in the content areas for emergent bilingual students and those with special needs employing the use of both English and the home language.

CBSE 7354T ESL Approaches Across Content Areas (1-6)

45 hours; 3 credits
Teaching of English as a second language through the communication arts (including listrening, speaking, reading and writing) and through the disciplines of the social sciences.

CBSE 7355T Mathematics, Science, and Technology for Linguistically Diverse Students
45 hours; 3 credits
Introduction to theory and methods of teaching emergent bilingual students science, mathematics, and
technology content through use of both home language and English. Adaptation of curriculum for both
emergent bilingual students and emergent bilingual students with special needs.

CBSE 7356T ESL Approaches Across Content Areas (7-12) Science and Technology
45 hours; 3 credits
Integrated approaches and strategies for the teaching of mathematics, science, and technology to students learning English as a second language in elementary and secondary classrooms.

CBSE 7357T Practicum: Bilingual Teaching 1-6

30 hours lecture, 30 hours laboratory; 3 credits
Pedagogical approaches and application of instructional methods used in transitional, developmental, and dual language models in bilingual teaching. Seminar and college-supervised field experience, grades 1-3 and grades 4-6.

CBSE 7358T Student Teaching: Teaching English as a Second Language in K-12
30 hours seminar, 120 hours student teaching; 3 credits
Pedagogical approaches and ideas underlying second language acquisition and teaching applied to the classroom. Approaches to integrating language and content instruction for all English language learners including those with special developmental and educational needs. Seminar and college supervised student teaching K-12.

CBSE 7359X Assessment & Intervention for Bilingual and Second Language
30 hours plus conference; 3 credits
Examination of cultural/linguistic competencies necessary to provide appropriate assessment and intervention for bilingual and second language learners. Examination of qualitative and quantitative procedures with consideration to individual linguistic, cultural, and socioeconomic background to determine difference vs. disorder. Applications to educational and community settings. This course is the same as SPEC 7536X.

Prerequisite: Either CBSE 7354T and 7356 or a course in normal development of language; or permission of the deputy chairperson.

CBSE 7360X Introduction to Bilingual and Second Language Acquisition
30 hours plus conference; 3 credits
Survey of bilingual and second language acquisition theory and research as it relates to differentiating speech and language difference from disorder. Examination of research associated with the socio- and psycho-linguistic, cognitive, and sociocultural dimensions of bilingual and second language development as well as bilingual education and multicultural perspectives. Data collection and analysis. Applications to educational and community settings. This course is the same as SPEC 7535X.

Prerequisite: a course in normal language acquisition or permission of the deputy chairperson.

CBSE 7361T Seminar: Independent Research Project in Second Language Learning
45 hours; 3 credits
Principles and methods in research in TESOL with emphasis on research in English language learning classroom settings. Development of observation and recording methodologies emphasizing the role of teacher as researcher. Scope and variety of educational research; principles and characteristics of qualitative and quantitative research; structure and organization of a research project. Review of research literature related to current themes and issues in education.

Prerequisite: Childhood and Special Education 7360X.

CBSE 7380T Introduction to Literacy Research and Technology
45 hours plus conference; 3 credits
Educational research in literacy instruction. Use of educational research technology to analyze and assess literacy in urban schools including children with special needs and English language learners.

Corequisite: Childhood and Special Education 7001T.

CBSE 7381T Seminar in Applied Theory and Research in Literacy I
45 hours plus conference; 3 credits
Advanced concepts of educational research, including design of research proposals and data collection. Application of techniques of research using materials relevant to literacy. Consultation and application in appropriate field settings. Design and implementation of an original research project. It must be continued and completed in 7382T.

CBSE 7382T Seminar in Applied Theory and Research in Literacy II
45 hours plus conference; 3 credits
Continuation of Education 7381T [702.12T].

CBSE 7383T Methods and Practicum in Literacy, Kindergarten to Grade 2
30 hours, 30 hours supervised field; 3 credits
Development, application, and implementation of literacy strategies with children of diverse abilities. Development of curriculum materials based on the theories and research findings discussed in the area of literacy from birth to grade 2. Presentation of supervised cases study in formal setting.

CBSE 7384T Methods and Practicum in Literacy, Grades 3 to 6
30 hours, 30 hours supervised field; 3 credits
Development, application, and implementation of literacy strategies with children of diverse abilities. Development of curriculum materials based on the theories and research findings discussed in the area of literacy from grades 3 to 6. Presentation of supervised case study in formal setting.

CBSE 7385T Topics in Literacy Education Current Literacy Issues
45 hours lecture; 3 credits
Relationships of selected factors within family, school, and society as they influence the learner's growth in literacy. Developing the teacher's ability to respond to the talents, needs, and abilities of the learner by structuring appropriate literacy environments from birth to grade 6. Study of recent literacy research including English language learning and children with special needs.

CBSE 7386T Literacy Education: Communication
45 hours lecture; 3 credits
Analysis of recent research findings in language acquisition and in the development and use of verbal and nonverbal communication skills from birth to grade 6. The influence of group membership and cultural pluralism on the development of these skills with special attention to the bi-dialectal child and the English language learner. Analysis of the implications for literacy education, wtih emphasis on media literacy and new literacies.

CBSE 7387T Literacy Skills, Instructional Strategies, and Assessment
45 hours; 3 credits
Approaches to assess and improve students' literacy abilities through the use of records, interviews, observations, portfolios, and formal and informal assessments. Procedures for the selection, administration, and evaluation of test materials. Study of illustrative case studies including English language learners and students with special needs.

CBSE 7388T Administration of Literacy Programs
45 hours; 3 credits
Theory and practice of the leadership role of literacy/reading specialists in school and community literacy programs. Techniques for successful exercise of leadership in developing goals, providing professional development, working with families and communities, and implementing literacy programs.

CBSE 7400T Childhood Mathematics Education: Advanced Methodology and Practice
45 hours plus conference; 3 credits
Development, application, and implementation of methodology and materials, and related research and theoretical perspectives. Principles and standards for mathematics curriculum, instruction, and assessment. Emphasis on teaching and learning in the number, operations, and algebra strands of the 1-6 curriculum. Organization for instruction. Literacy and mathematics. Thematic instruction. Use of technology in teaching and learning mathematics.

Prerequisite: two of the following mathematics courses: 7141T, 7142T, 7143T, 7144T, [605.5T], [605.6T], or mathematics courses approved by the program adviser.

CBSE 7401T Middle Childhood Education: Advanced Methodology and and Interdisciplinary Approaches
45 hours plus conference; 3 credits
Continuation of CBSE 7400T [712.23T]. Emphasis on teaching and learning involving fractions, decimals, and percents, measurement/geometry, probability, and data interpretation. Interdisciplinary approaches involving mathematics and science, social studies, and literacy. Writing and assessment in mathematics. Diagnostic techniques, and adaptations of materials and methods for special needs learners. Introduction to research paradigms in mathematics education.

Prerequisite: Childhood and Special Education 7400T.

CBSE 7402T Seminar in Applied Theory and Research in Mathematics Education I
45 hours plus conference; 3 credits
Educational research as applied to the analysis of teaching and learning of mathematics. Qualitative and quantitative research. Use of educational research techniques to analyze teaching and learning of

mathematics in urban schools. Mathematics vocabulary, reading, and writing in mathematics. Focus on children with special needs and English-language learners. Nature and design of action research in mathematics education. Selection of a research topic and questions, review of related research.

Prerequisite: Childhood and Special Education 7401T.

CBSE 7403T Seminar in Applied Theory and Research in Mathematics Education II
45 hours plus conference; 3 credits
Continuation of Childhood and Special Education 7402T [701.23T]. Techniques for analyzing qualitative and quantitative data. Design, implementation, and reporting a research project. Current issues in mathematics education. Professional leadership in mathematics education.

Prerequisite: Childhood and Special Education 7402T.

CBSE 7405T Advanced Methods for Teaching Childhood Mathematics
45 hours plus conference; 3 credits.
Advanced study of learning and teaching mathematics in grades 1-6 for all children, including English language learners and children with special needs. Problem solving and inquiry as contexts for development of mathematical understanding and skills. National, state, and local standards and curriculum guidelines. Classroom learning environments, mathematical discourse. Models of teaching and adaptations for special student populations. Formal and informal assessments. Role of technology in teaching and learning mathematics.

Prerequisite: A course in teaching childhood mathematics, and 6 credits in mathematics.

CBSE 7440T Teaching Mathematics in Childhood Education
45 hours plus conference; 30 hours field experience; 3 credits
Problems and issues in the organization and teaching of subject matter. Techniques of instruction. Introduction to approaches for teaching mathematics to all children from preschool through grade 6, including English language learners and students with special needs. Overview of children's development of number and of geometric and spatial sense; informal mathematical knowledge of young children. National, state, and local standards and curriculum guidelines. Teaching mathematical concepts, computational skills, and higher order thinking processes; integration of mathematics with literacy and other subject areas; formal and informal assessment. Role of technology in teaching and learning mathematics.

Prerequisite: Mathematics *1401 or a mathematics course approved by the program adviser.

CBSE 7471T Childhood Education: Student Teaching in Grades 1 - 6
30 hours, 300 hours or 40 days supervised teaching practice; 3 credits
Supervised fieldwork in teaching childhood education; problems and issues in the organization of all aspects of childhood education curriculum; emphasis on the development of an interdisciplinary approach to teaching. Focus on self-reflective teaching and assessment; techniques of instruction, integration of instructional technology, classroom management, skills in fostering effective relationships and interactions to support all students, development of collaborative school-community relationships. Readings and discussions on significant education issues, including preventing child abduction, substance abuse, safety education, and child abuse awareness. Attention is given to the particular needs and interests of students, including English language learners and students with special needs.

Prerequisite: Childhood and Special Education 7205T, 7216X, 7440T, 7213T or permission of the program head.

CBSE 7501X Analysis of Classroom Interaction and Curriculum
45 hours seminar, 20 hours field work; 3 credits
Improving teaching methods through techniques of self-analysis and analysis of classroom interactions. Analysis of the instructional settings and instructional strategies with focus on students with special needs and English language learners. Analysis of learning processes and modes of communication in the classroom. Examination of the specialized discourses of the subject disciplines in adolescent, middle, and childhood curricula. Analysis of uses of technology in the classroom.

CBSE 7503X Teaching Writing across the Curriculum

30 hours plus conference; 3 credits
Examination of the writing process as it may be used in subject areas. Study and application of recent research to classroom practice. Analysis of the relationship between writing, critical thinking, and learning and teaching in the subject area.

CBSE 7518T Seminar II in Pedagogy and Curriculum: Health and Nutrition Sciences
45 hours; 2 credits
Advanced theories and methods of teaching health and nutrition sciences at grade levels appropriate for New York State certification requirements; focus on developing reflective practitioners and research based instruction; analysis of New York State Learning Standards in health; teaching health and nutrition sciences to all students, including students with special needs and English language learners; integrating technology into the classroom; developing, implementing, and evaluating the health and nutrition sciences curriculum in urban classrooms. Students enroll in workshops in identifying, reporting, and responding to child abuse and in substance abuse, fire and arson prevention and safety education.

Prerequisite: 7500X [742X], 7501X [792.1X], and permission of the chairperson of the major department and the head of Adolescence Education and Special Subjects.
Prerequisite or corequisite: 7536T [763.16T] and 7542T [764.5T].
Corequisite: 7543T [764.51T].

CBSE 7549X Theater in the Classroom

30 hours plus field experience; 3 credits
Theater work in classroom settings. Existing models of theater arts in education. Using theater, improvisation and creative drama to explore specialized subject areas and pedagogy. Practical studio work. The classroom as theater. Collaboration of education and theater students on theater in education projects, including workshops in focus schools. Mainstage and outside productions. Visits to area public schools. Creation of age-appropriate theater study guides. (This course is the same as Theater 7141X.)

CBSE 7551T Critical Issues in Education: Social Values and Individual Needs: Health and Nutrition
30 hours lecture, 30 hours laboratory; 3 credits
Systematic study of the teacher's role, focusing on interactions of people and environments in an educational setting. Topics in educational foundations provide concepts for examining teacher and student diversity and teacher role. Exploratory research techniques.

CBSE 7652T Teaching Young Children with Special Needs

30 hours lecture, 30 hours laboratory; 3 credits

Development of competencies needed to teach young children with special needs; formal and informal assessment, goal setting, and integration of theories of learning, the expressive arts and research validated practice into curriculum across a variety of content areas. Field experience in a setting with young children who present difficulties in adjustment and cognition. Focus on reflective practice and on the development of nurturing and stimulating learning environments.

CBSE 7653T Collaborative Planning and Teaching in Urban Classrooms
30 hours lecture, 60 hours supervised field experience and conference; 3 credits
Development of collaborative teacher competencies needed to effectively teach school-aged students, including students with special needs and English language learners. Integration of theories of learning and development, classroom organization and management, and research validated practice into curriculum across a variety of content areas. Field experience in urban educational settings with students who present challenges in adjustment and cognition. Focus on historical, social and legal foundations of education, transition planning, family and community engagement, collaborative models for teaching, goal setting, and decision making in culturally appropriate contexts.

CBSE 7656T Seminar in Applied Theory and Research
45 hours seminar, plus conference; 3 credits
Continuation of the study of educational research and methodology and completion of an independent research project related to an area of special education.

Prerequisite: Childhood and Special Education 7680T.

CBSE 7657T Seminar in Applied Theory and Research
45 hours seminar, plus conference; 3 credits
Continuation of the study of educational research and methodology and completion of an independent research project related to an area of special education.

Prerequisite: Childhood and Special Education 7680T.

CBSE 7659T Instructional Strategies for Students with Special Needs
45 hours; 3 credits
Instructional strategies to teach middle school and high school aged students with special needs. Educational and assistive technology and research supporting its use. Understanding and using curriculum based assessment data for strategy selection and instruction. Focus on inquiry processes across content areas, including the expressive arts. Work in a setting with students with special needs.

CBSE 7662T Collaboration with Families
45 hours lecture; 3 credits
Issues of disability as it affects the family unit; development of teacher competence in applying appropriate collaborative approaches and strategies, utilizing community resources, and improving communication in culturally and linguistically diverse contexts. Critical exploration of research.

CBSE 7663T Special Issues in Education: Communication and Young Children with Special Needs
30 hours lecture plus conference; 3 credits
Study of language acquisition, including childhood bilingualism, distinctions between language disorders in young children with special needs and language acquisition problems. Understanding of nonverbal behavior. Alternative strategies, including the unique aspects of artistic representation. Assistive technology for enhancing communication with young children with language difficulties and pronounced cognitive and adjustment issues. Implications for collaboration with other professionals, diverse families, and community organizations. Field experiences.

CBSE 7664T Special Issues in Education: Communication and School-aged Students with Special Needs
30 hours lecture plus conference; 3 credits
Study of language acquisition including childhood bilingualism and speech, hearing, and communication problems of students with disabilities. Understanding the distinction between language disorders and language acquisition problems. Techniques of nonverbal communication including the unique aspects of artistic representation. Assistive technology for enhancing communication and access to general education curriculum; influence of group membership and culture on development of communication skills. Implications for collaboration with professionals, diverse families, and community organizations. Field experiences.

CBSE 7665T Learning Environments for Young Children with Diverse Learning and Developmental Needs
45 hours lecture; 3 credits
Implementation of supportive and enriched learning environments that influence the development of the young child with special needs. Examination of positive behavior supports, crisis intervention and play on the development of young children, including English language learners as well as those with developmental delays or special needs from birth through early childhood. Role of family-based practices in creating learning environments at home and in educational settings.

CBSE 7666T Special Issues in Education: Classroom and School-wide Learning Environments for Students with Low Incidence Disabilities
30 hours plus conference; 3 credits
Current issues in teaching students with severe and multiple disabilities, including autism spectrum disorders. Focus on emerging trends and research. Validated approaches in curriculum, instruction, life skills, functional behavioral assessment and positive behavioral supports. Examination of the politics of labeling, the constructs of disability, and the influence of school culture on inclusion, transenvironmental planning, and the development of least restrictive environments. Independent and small group study. This course is the same as SPEC 7316X.

CBSE 7667T Education of Diverse Gifted Children and Youth
45 hours; 3 credits
Educational approaches for working with diverse gifted and talented children and youth; models and strategies for differentiating instruction. Focus on contemporary theories and research. Field experiences in schools and/or community settings.

CBSE 7668T Students with Special Needs: Gifted Education
30 hours plus conference; 3 credits
Investigation of the developmental nature, causes, and characteristics of diverse gifted and talented students. Implications for classroom teachers and other professionals in areas of interpersonal interactions, collaboration, and instruction. Focus on historical, social, and legal foundations of gifted education. Theories of learning and development. Influence of gender, class, language, race/ethnicity, disabilities, and

sexuality on the construction of giftedness, as interpreted within and across cultures. 10 hours of field experience in a variety of schools and classroom settings.

CBSE 7669T Assessment of Diverse Gifted and Talented Students
30 hours plus conference; 3 credits
Critical review of formal and informal assessments of the cognitive, social, and affective characteristics of diverse gifted and talented students, including gifted and talented students with special needs. Cultural, linguistic, and societal factors involved in identification, placement, and the academic performance of diverse gifted and talented students. Implications for classroom settings, teaching, and collaboration with parents and other professionals. 10 hours of field experience in a variety of school and classroom settings.

CBSE 7670T Curriculum Design for Diverse Gifted and Talented Students
30 hours plus conference; 3 credits
Principles, rationale, and research-validated methods for differentiating curriculum and instruction for diverse gifted and talented students, including gifted and talented students with disabilities. Inquiry processes across all content areas. Use of technology for differentiation of instruction. Approaches to the design, management, and evaluation of learning environments across a variety of settings. Collaboration with other professionals. Focus on the New York State Learning Standards and educational experiences of students from diverse cultural and linguistic backgrounds. 20 hours of field experience in a variety of schools and classroom settings.

CBSE 7671X Children and Youth with Special Needs
45 hours; 3 credits
Characteristics of diverse student populations with a focus on English language learners and students with special needs, including the gifted. Clinical practice in the classroom environment regarding assessment, curriculum, management, integrations and positive supports, and interventions for English language learners and students with special needs, including the gifted in general education settings. Review of regulatory compliance. Focus on collaboration with other professionals including co-teaching, consultative and itinerant models. Engagement of family members in collaborative efforts. Clinical experiences (20 hours) in special education and/or inclusive classrooms required.

CBSE 7672T Teaching in Least Restrictive Environments
30 hours plus conference; 3 credits
Strategies to integrate and support students with special needs in least restrictive environments. System and organizational change theories and strategies for developing models of inclusive education. Focus on curriculum and collaborative processes with other professionals including co-teaching, consultative, and itinerant models. Engagement of family members in collaborative efforts. Students will implement a consultative/collaborative project. Field experiences in a variety of school and community settings.

CBSE 7674T Students with Special Needs
30 hours plus conference; 3 credits
Investigation of the developmental nature, causes, and characteristics of young children and students with special needs including giftedness. Implications for classroom teachers and other professionals in areas of interpersonal interactions, interagency collaboration, and instruction. Focus on historical, social and legal foundations of special education and the politics of special education. Theories of learning and development. Influence of gender, class, language, sexuality and race/ethnicity on the construction of disability, as interpreted within and across cultures. Field experiences in schools and a variety of community settings.

CBSE 7675T The Family and Community of Students with Special Needs
30 hours plus conference; 3 credits
Analysis of the issues for the family and the child with special needs within diverse family systems. Teacher-parent, parent-child, sibling-child relations, collaboration, and community resources for young children and school-aged students. Focus on life cycle from birth through adulthood. Emphasis on urban, linguistic, and cultural perspectives, resource access, and development of parent-community partnerships. Field experiences in school settings and a variety of community settings.

CBSE 7676T Learning Environments for Students with Special Needs
45 hours; 3 credits
Approaches to the design, management, and evaluation of optimal learning environments. Review of methods, including behavior management, crisis intervention, group process, positive social interaction skills, and peer mediation. Case studies in diverse settings as a basis for analysis, discussion, and interpretation of behavior within and across cultures. Development of a reflective approach to teaching and problem solving.

CBSE 7677T Curriculum Modifications for Teaching Students with Special Needs
45 hours; 3 credits
Adaptation of general education curriculum for teaching students across the range of special needs, including giftedness and English language learners. Principles, rationale, and research-validated methods of instructing and assessing special populations in a variety of settings. Inquiry processes across all content areas and life skills, including literacy, mathematics, social science, and the expressive arts. Focus on the New York State Learning Standards and educational experiences of children and youth from diverse cultural and linguistic backgrounds. Field experiences in schools and a variety of community settings. This course is the same as SPEC 7320X.

CBSE 7678T Educational Assessment of Young Children and Students with Special Needs
45 hours seminar plus conference; 3 credits
Critical review and use of formal and informal strategies for the assessment and evaluation of the cognitive, behavioral, social, and affective characteristics of young children and school-aged students with special needs including giftedness. Attention will be given to understanding cultural, linguistic, and societal factors involved in identification, placement and the academic and behavioral performance of students. Focus on curriculum-based assessment and collaboration with other professionals and parents. Field experiences in a variety of school and community settings.

CBSE 7679T Teaching Literacy to Students in Inclusive Classrooms
30 hours lecture, 30 hours field experience; 3 credits
Methods of teaching literacy to students in general and special education classrooms, including those who are English language learners. Literacy strategies and programs for reading and related communication skills, and use of literature in settings for students with diverse learning needs. Field experiences. Role of the family, community and culture in literacy development. Focus on instructional technology, current research validated strategies, and New York State

Learning Standards.

CBSE 7680T Research Methods in Special Education

45 hours seminar, plus conference; 3 credits
Concepts in educational research and the critical analysis of research pertinent to teaching the student with special needs. Development of research skills and the role of teacher as researcher culminating in the formulation of individual research projects related to teaching students with special needs.

CBSE 7681T Seminar and Student Teaching: Students with Special Needs

150 hours; 3 credits
Supervised instruction in teaching young children and school-aged children with special needs. Supervision provided by college faculty in the student's work setting. Discussion with school-based supervisors. Projects related to school and supervisory experiences; a minimum of four supervisory sessions per semester. This course is the same as SPEC 7394X.

CBSE 7682T Seminar in Teaching Students Experiencing Emotional Conflict

30 hours plus conference; 3 credits
Analysis of theory and research-validated practices related to the teaching of students experiencing emotional conflict. Discussion of daily classroom and instructional management and implementation of instructional strategies, including literacy across the curriculum with an emphasis on verbal and visual literacies. Exploration of teacher/student interactions and teacher reflective practice.

CBSE 7683T Atypical Development in Infants, Toddlers, and Young Children

30 hours plus conference; 3 credits
Developmental processes, early identification and intervention, appropriate curriculum in home, child care, preschool, and early childhood settings. Implications for teacher-parent relations, and development of enriched and nurturing environments for infants, toddlers, and young children with atypical development. Focus on family, interagency, and professional collaboration across cultural, linguistic, and ethnic contexts. Field experiences.

CBSE 7684T Adolescence and Emotional Conflict

45 hours; 3 credits
Characteristics, needs, intervention techniques, and curricula. Educational settings, structure of middle school and high school programs for the adolescent experiencing emotional conflict, including the expressive arts and instruction to meet New York State Learning Standards. Preparation for life skills and transition planning.

CBSE 7685T An Introduction to Autism Spectrum Disorders

30 hours plus conference; 3 credits
Contemporary issues in autism spectrum disorders from an interdisciplinary and cross-paradigm perspective. Collaborative models for assessment and intervention within the fields of speech-language pathology, special education, and school psychology. Emphasis on partnerships with families. This course is the same as Speech 7317X [717X].

Prerequisite: any undergraduate or graduate course in either child development, language acquisition, or speech and language disorders, or permission of the deputy chairperson or program head.

CBSE 7686T Speech, Language, and Communication Development of Children on the Autistic Spectrum: Assessment and Intervention

30 hours plus conference; 3 credits
Contemporary issues in speech, language, and communication in children on the autistic spectrum. Models of typical and atypical speech, language and communication acquisition. Qualitative differences and unique strengths and challenges. Assessment and intervention from different theoretical perspectives, including developmental and behavioral approaches, with emphasis on the integration of various models. Consideration of augmentative and alternative communication. (This course is the same as Speech 7319X.)

Prerequisite: Speech 7317X or Childhood and Special Education 7685T.

CBSE 7688T Seminar in Special Education: Students with Learning Disabilities

45 hours; 3 credits
Seminar concerning problems and issues in the organization of subject matter, techniques of instruction, classroom management, pupil adjustment, school-community relations. Attention is given to the particular needs and interests of students, with provision for individual and group study. (Not applicable to master's programs for teachers of the emotionally handicapped, mentally retarded, learning disabled.)

Corequisite: Childhood and Special Education 7214T or 7542T, or employment as a teacher in a public or approved private school.

CBSE 7689T Seminar in Special Education: Students Experiencing Emotional Conflict

45 hours; 3 credits
Seminar concerning problems and issues in the organization of subject matter, techniques of instruction, classroom management, pupil adjustment, school-community relations. Attention is given to the particular needs and interests of students, with provision for individual and group study. (Not applicable to master's programs for teachers of the emotionally handicapped, mentally retarded, learning disabled.)

Corequisite: Childhood and Special Education 7214T or 7542T [764.5T], or employment as a teacher in a public or approved private school.

CBSE 7690T Seminar in Special Education: Developmental Disabilities

45 hours; 3 credits
Seminar concerning problems and issues in the organization of subject matter, techniques of instruction, classroom management, pupil adjustment, school-community relations. Attention is given to the particular needs and interests of students, with provision for individual and group study. (Not applicable to master's programs for teachers of the emotionally handicapped, mentally retarded, learning disabled.)

Corequisite: Childhood and Special Education 7214T or 7542T, or employment as a teacher in a public or approved private school.

CBSE 7691T Seminar in Special Education: Classroom Organization and Management

45 hours; 3 credits
Seminar concerning problems and issues in the organization of subject matter, techniques of instruction, classroom management, pupil adjustment, school-community relations. Attention is given to the particular needs and interests of students, with provision for individual and group study. (Not applicable to master's programs for teachers of the emotionally handicapped, mentally retarded, learning disabled.)

Corequisite: Childhood and Special Education 7214T or 7542T, or employment as a teacher in a public or approved private school.

CBSE 7692T Seminar in Special Education: Literacy and Communication
45 hours; 3 credits
Seminar concerning problems and issues in the organization of subject matter, techniques of instruction, classroom management, pupil adjustment, school-community relations. Attention is given to the particular needs and interests of students, with provision for individual and group study.

CBSE 7693T Seminar in Special Education: Mathematics and Students with Special Needs
45 hours; 3 credits
Seminar concerning problems and issues in the organization of subject matter, techniques of instruction, classroom management, pupil adjustment, school-community relations. Attention is given to the particular needs and interests of students, with provision for individual and group study. (Not applicable to master's programs for teachers of the emotionally handicapped, mentally retarded, learning disabled.)

Corequisite: Childhood and Special Education 7214T or 7542T, or employment as a teacher in a public or approved private school.

CBSE 7694T Seminar in Special Education: Learning Process and the Arts
45 hours; 3 credits
Seminar concerning problems and issues in the organization of subject matter, techniques of instruction, classroom management, pupil adjustment, school-community relations. Attention is given to the particular needs and interests of students, with provision for individual and group study. (Not applicable to master's programs for teachers of the emotionally handicapped, mentally retarded, learning disabled.)

Corequisite: Childhood and Special Education 7214T [764.2T] or 7542T [764.5T], or employment as a teacher in a public or approved private school.

CBSE 7695T Inclusive Teaching Practicum

10 hours seminar and 100 hours of supervised student teaching per course; 1 credit

Prerequisite: Matriculation in the M.S in Education: Teacher of students with disabilities.

CBSE 7696T Inclusive Teaching Practicum

10 hours seminar and 100 hours of supervised student teaching per course; 1 credit

CBSE 7697T Inclusive Teaching Practicum

10 hours seminar and 100 hours of supervised student teaching per course; 1 credit

Prerequisite: 7696T [764.7T]

CBSE 7698T Inclusive Teaching Practicum

10 hours seminar and 100 hours of supervised student teaching per course; 1 credit

Prerequisite: 7697T [764.8T]

CBSE 7699T Student Teaching Practicum, Education of Middle Childhood and Adolescent Students with Special Needs
15 hours seminar, at least 150 hours or 20 days of supervised student teaching/practicum; 3 credits
Supervised field work in all aspects of middle childhood and high school curriculum. Emphasis on the development of an interdisciplinary approach to teaching middle and high school aged students from diverse backgrounds, students with special needs, and students who are English language learners. Integration of instructional technology, interdisciplinary curriculum and topics aligned with New York State standards.

CBSE 7820T Supervised Laboratory and Field Experience

30 hours seminar, 60 hours laboratory and directed independent activity; 4 credits
Consideration of specific aspects of human behavior in a variety of work or community settings. Observation and discussion of behavior. Preparation of materials.

CBSE 7821T Sources of Information

45 hours; 3 credits
Introduction to theories of information, appraisal, and diagnosis and to appraisal and measurement techniques. Role and function of guidance counseling. Introduction to group dynamics. Theoretical basis for strategies of planned intervention.

CBSE 7822T Cases in Planned Intervention

30 hours lecture, 30 hours laboratory; 3 credits
Selected cases. Helping students formulate and follow through on planned intervention strategies. Students are encouraged to analyze their work situations in terms of strengths and weaknesses and to develop strategies for improving the total program as well as their own functioning.

CBSE 7885T Advanced Human Development I

30 hours lecture, 60 hours laboratory and directed independent activity; 4 credits
Theories of emotional and intellectual development from birth through young adulthood. Introduction to anthropological, developmental, psychoanalytic, field, and social psychological theories. Cognitive sequences necessary for intellectual development and effects of socialization experiences.

CBSE 7886T Advanced Human Development II

30 hours lecture, 60 hours laboratory and directed independent activity; 4 credits
Relation of theories of development to the function of the counselor on the job. Effect of institutions on individual development. Relationship of theories of career development and decision making to general theories of human development.

CBSE 7908X Cognitive and Intellectual Development

45 hours; 3 credits
Critical exposition, in light of recent research, of developments in the fields of cognitive and intellectual development. Examination of the psychological bases for such representative educational issues as

readiness, grouping, learning to learn, curriculum structure, transfer and concept learning.

The following inactive course(s) will only be offered if there is sufficient demand:

CBSE 6005T Issues and Strategies in Education

CBSE 7020T Prevention, Diagnosis, and Remedial Treatment of Disabilities in the Language Arts

CBSE 7025T Recent Research and Innovation in School Practice for Supervisors of Student Teachers

CBSE 7036X Project Seminar in Computer Education

CBSE 7536T Seminar I in Pedagogy and Curriculum:Health and Nutrition Sciences

CBSE 7650T Teacher Function and Analysis of Teacher/Learner Behavioral Interactions

CBSE 7673T Psychological and Sociological Problems of Adolescence

CBSE 7894T Community Resources in Guidance

Computer and Information Science

Department office: 2109 Ingersoll Hall
Phone: 718.951.5657

Full-time Faculty

Distinguished Professors: Parikh, Raphan

Professors: Arnow, Augenstein, Bar-Noy, Dexter, Kopec, Langsam, Parikh, Parsons, Psarris, Raphan, Rudowsky, Sklar, Sokol, Tenenbaum, Weiss, Whitlock, Yanofsky, Zhou, Ziegler

Associate Professors: Cox, Jones, Schnabolk, Thurm, Yarmish

Assistant Professors: Clark, Cogan, Kletenik, Levitan, Mandel

Lecturer: Zwick

The Department of Computer and Information Science (CIS) leads the City University of New York - as well as many other universities and colleges nationwide - in cutting-edge resources for teaching and learning about computer and information science. Our expert faculty members are always ahead of the digital-world curve. A graduate degree from our department is extremely well respected by organizations in all industries nationwide. With your Brooklyn College CIS graduate degree, you can obtain positions at all career levels or advance your current career.

M.A. degree program in computer science
HEGIS code 0701; SED program code 77202

Matriculation requirements

Applicants are expected to have the equivalent of at least 15 credits in computer and information science and related areas, including all of the following: knowledge of a high-level computer language (preferably C++ or Java), knowledge of assembly language and computer architecture, a course in discrete structures, a course in data structures, and a course in calculus. Students who do not have all of these requirements can be accepted with the condition that they complete these courses at the undergraduate level.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty credits are required for the degree. Students must maintain at least a B (3.00) average.

Students must complete 30 credits in courses numbered 7000 and above, including at least three courses labeled with an asterisk (*) and at least one course from each of the following five groups:

1. Computer and Information Science 7310X, 7312X, 7110X, 7120X, 7124X, 7132X;
2. Computer and Information Science 7200X, 7210X, 7212X, 7214X;
3. Computer and Information Science 7410X, 7412X, 7510X, 7512X, 7610X, 7414X, 7620X, 7500X;
4. Computer and Information Science 7422X, 7220X, 7221X, 7224X, 7228X;
5. Computer and Information Science 7302X, 7330X, 7360X, 7332X, 7334X.

Up to 10 credits in courses in other departments may be substituted, with the permission of the graduate deputy chairperson.

Graphics/Multimedia concentration: Students who wish to have a concentration in graphics/multimedia should take any three of the following courses as part of their program in satisfying the degree requirements: Computer and Information Science 7610X, 7620X, 7622X, 7630X, 7640X, 7642G, 7650X.

Students must complete one of the following: (a) Computer and Information Science 7990G and a thesis acceptable to the department; no more than 6 credits in thesis research may be counted toward the degree; or (b) pass a written comprehensive examination.

As an exception to the general college rule, the comprehensive examination in the Department of Computer and Information Science may be taken in the term preceding the one in which the student will complete all course requirements for the degree. However, all other college regulations concerning the comprehensive examination still apply. Students are strongly advised to take advantage of this exception and to take the comprehensive examination in the earlier semester.

M.S. degree program in health informatics
HEGIS code 0799; SED program code 86190

The master of science health informatics program focuses on the use of technology in a wide range of health care and medical services.

Matriculation requirements

Applicants must offer at least 18 credits in undergraduate or graduate courses in health and nutrition sciences and/or health-related fields. Applicants are also expected to have the equivalent of at least 12 credits in computer and information science, including all of the following: knowledge of a high-level computer language (preferably C++ or Java), a course in discrete structures and a course in data structures. Students who do not have all of these requirements can be accepted with the condition that they complete these courses at the undergraduate level.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty are required for the degree.
Students must complete the following courses:
1. One course chosen from Computer and Information Science 7200X, 7354X, 7522X, 7532X and 7534X;
2.Computer and Information Science 7500X, 7510X, 7530X and 7450X;

3. One additional Computer and Information Science course numbered 7000 or above;
4. Three courses chosen from Health and Nutrition Sciences 7110X, 7120X, 7130, 7140X and 7145X, and Kinesiology 7000X, 7044X, 7100X and 7342X;
Students must also complete one of the following:
a) Computer and Information Science 7990G and a thesis acceptable to the Department of Computer and Information Science; or
b) Computer and Information Science 7900X and a project acceptable to the Department of Computer and Information or Kinesiology 7990X and a project acceptable to the Department of Kinesiology, with the approval of the Chair or Graduate Deputy of the Department of Kinesiology.

M.S. degree program in information systems
HEGIS code 0702; SED program code 89058

The M.S. in information systems is designed for students who elect to focus on the use of computer systems to manage business and administrative operations and issues.

The program provides preparation for a wide variety of positions within the constantly expanding fields of information systems and technology, including computer systems software engineer, computer applications software engineer, computer systems analyst, database administrator, and network systems and data communication analyst. All of these positions appear in the ten top salaried jobs in the Bureau of Labor Statistics list of the thirty fastest growing jobs, projected through 2014. The program also prepares students for doctoral studies or research work in the field.

A student whose first degree was in an area other than computer science area can take undergraduate prerequisite courses at Brooklyn College to prepare for the master's program. All graduate courses are offered in the evening, making it convenient to combine work with study. A wide variety of courses are available in such fields as information systems, artificial intelligence, networks, multimedia, database systems, algorithms and problem solving, and many others. Our faculty members have published widely in all of these fields, and many are recognized experts in their areas.

Matriculation requirements

Applicants are expected to have the equivalent of at least 18 credits in computer and information science and related areas, including all of the following: knowledge of a high-level computer language (preferably C++ or Java), knowledge of assembly language and computer architecture, a course in discrete structures, a course in data structures, a course in calculus, and a course in probability and statistics. Students who do not have all of these requirements can be accepted with the condition that they complete these courses at the undergraduate level.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty-six credits are required for the degree. Students must maintain at least a B (3.00) average.

Students must complete all of the following:
(a) Computer and Information Science 7300X or 7310X, 7500X, 7510X, 7530X, 7520X, and 7540X.
Students who have completed an undergraduate course in the area of one or more of these courses may, with the permission of the department, substitute another 7000-level course in the department for each such course.
(b) Two courses chosen from among Computer and Information Science 7100X, 7124X, 7132X, 7354X, 7410X, 7412X, 7414X, 7512X, and 7610X.
Students who take the thesis option (see "f" below) may, with permission of the department, present a maximum of 3 credits in the courses 7990G, 7992G, and/or 7994G as a substitute for one of these courses.

(c) One of Computer and Information Science 7330X, 7332X or 7334X.
(d) Two courses chosen from among Computer and Information Science 7522X, 7532X, 7534X.
(e) Three additional credits in courses numbered 7000 or above in the department; with the permission of the department; these credits may be in other departments (e.g., economics, mathematics, or psychology).
(f) Students must do one of the following:
(1) complete Computer and Information Science 7990G, Thesis Research, and a thesis acceptable to the department; or
(2) pass a written comprehensive examination.

As an exception to the general college rule, the comprehensive examination in the Department of Computer and Information Science may be taken in the term preceding the one in which the student will complete all course requirements for the degree. However, all other college regulations concerning the comprehensive examination still apply. Students are strongly advised to take advantage of this exception and to take the comprehensive examination in the earlier semester.

CUNY Ph.D.

The City University of New York offers a doctoral program in computer science. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Computer and Information Science Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Computer and Information Science Department and the executive officer of the doctoral program.

Courses

Unless a prerequisite is specific, a student may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

*Students completing the requirements for the M.A. in computer and information science must complete at least three courses labeled with an asterisk, as stated under "Degree requirements."

CISC 7100X Foundations of System Programming

37½ hours plus conference and independent work; 3 credits
Programming with the basic resources of the operating system. Process, threads, and the inter-process/thread communication facilities, signals, pipes, sockets, semaphores, and shared memory. Allocation and protection of resources. Process and thread scheduling. Network programming.

Prerequisite: a course in data structures.

CISC 7110X Compiler Construction

37½ hours plus conference and independent work; 3 credits
Systems design of higher-level languages and their processors. Comparison and analysis of programming language structures and dictions. Syntax description, parsing algorithms and their implementation. Representation of semantics and semantic analysis. Object code generation and optimization. Bootstrapping techniques, higher-level translators, and self-compilers. This course requires a substantial amount of programming. (Not open to students who have completed a course in compiler construction.)

Prerequisite: A course in assembly language; and a course in data structures.

CISC *7120X Programming Languages and Compilers

37½ hours plus conference and independent work; 3 credits
In-depth study of major features of programming languages and how they are implemented by compilers. Survey of syntax structures, lexical and semantic analysis. Role of finite automata and regular expressions in language design. Parsing techniques and parse tables. Code generation, optimization, and error detection and recovery.

Prerequisite: Computer and Information Science 7110X [707X] or a course in compilers.

CISC *7122X Programming Language Design

37½ hours plus conference and independent work; 3 credits
An advanced course covering the major issues associated with the design and implementation of programming languages: the functional vs. the imperative language, very high-level languages, syntax issues, methods of defining semantics, strong vs. weak typing, extensibility, verification, exception handling, concurrency constructs. The course will not be a survey of existing languages; rather, the emphasis will be on recent and current controversies concerning programming languages in general.

Prerequisite: Computer and Information Science 7110X [707X] or a course in compilers.

CISC *7124X Object-Oriented Programming

37½ hours plus conference and independent work; 3 credits
Object-oriented programming concepts and techniques: data abstraction and encapsulation, classes, inheritance, overloading, polymorphism, interfaces. Introduction to and use of one or more object-oriented languages such as C++ or Smalltalk. An introduction to object-oriented design.

Prerequisite: one of the following: Computer and Information Science 7110X [707X], 7120X [708X], 7122X [709X], 7310X [704X], or 7312X [705X],

CISC *7130X Logic Programming

37½ hours plus conference and independent work; 3 credits
Elementary formal systems and Post productions, unification algorithms, fixed-point semantics, Prolog interpreters and Prolog-oriented hardware, logic programming systems under development, applications to fifth-generation computing.

Prerequisite: Computer and Information Science 7420X [719.1X] or a course in mathematical logic.

CISC *7132X Declarative Programming

37½ hours plus conference and independent work; 3 credits
Functional, logic, and constraint programming paradigms and languages. Logic programming concepts: logic variables, unification, recursion, and backtracking. Constraint solving and constraint programming. Functional programming concepts: lambda calculus, pattern-matching, high-order

functions, strong typing, polymorphism, and lazy evaluation. Declarative programming languages: Prolog, Haskell, and CLP (Constraint Logic Programming).

Prerequisite: A course in discrete structures and a course in data structures; Computer and Information Science 7110X [707X] or 7310X [704X] or 7510X [717.1X].

CISC *7140X Functional Programming Languages

37½ hours plus conference and independent work; 3 credits
Backus's algebra of functional programs. The functional programming languages UNIX FP, ML, HOPE, IFP, and FL. Syntax and semantics of functional programming languages. Machine architectures for functional programming. Specialized specification and symbolic simulation of functional programs.

Prerequisite: A course in discrete structures; and one of the following: Computer and Information Science 7224X [724X], a course in formal languages, or a course in programming languages.

CISC 7200X Analysis of Algorithms

37½ hours plus conference and independent work; 3 credits
Introduction to algorithms and their complexity, including models of computation. Review of data structures and techniques of efficient program design. Analysis of algorithms chosen from sorting and searching, graph theory, pattern matching, matrix operations, and combinatorial optimization. Algorithms will be analyzed for their space, time, and other resource requirements. NP-complete problems. Complexity classes.

Prerequisite: A course in data structures; and a course in discrete structures.

CISC *7210X Graph and Network Algorithms

37½ hours, plus conference and independent work; 3 credits
Data structures to represent graphs. Graph traversal algorithms. Network algorithms. Algorithms for constructing minimum spanning trees, shortest paths, maximum flows, and Euler and Hamilton paths. Vertex and edge coloring algorithms. Computationally hard problems, NP-completeness, and approximation algorithms.

Prerequisite: Computer and Information Science 7200X [714X]

CISC *7212X Parallel Algorithms

37½ hours plus conference and independent work; 3 credits
Theoretical models for parallel computation. Parallel algorithms for the PRAM. Speedup and efficiency. Issues in the design of parallel algorithms for evolving real-world parallel architectures, including synchronization, overhead, and scalability.

Prerequisite: Computer and Information Science 7200X [714X] or a course in analysis of algorithms.

CISC *7214X Algorithms and Complexity

37½ hours plus conference and independent work; 3 credits
Definitions of P, NP, and NP-complete complexity classes and the relationship between these classes. Approximation algorithms and their efficiency. Other complexity classes. Current models and paradigms of computation. The P? = NP question is discussed and explored. Advanced topics from contemporary research.

Prerequisite: Computer and Information Science 7200X [714X] or a course in analysis of algorithms.

CISC 7220X Computability and Unsolvability

37½ hours plus conference and independent work; 3 credits
Formal systems, propositional and quantification logic, theorem proving, equivalent characterizations of effective computability. Turing machines, recursive functions, and sets. Other notions of Godel, Herbrand, Kleene, Church, Post, and Markov. Classification of unsolvable problems.

Prerequisite: Computer and Information Science 7221X or a course in theoretical computer science.

CISC 7221X Theoretical Computer Science

37½ hours plus conference and independent work; 3 credits
Overview of theoretical computer science. Finite automata and pushdown automata, grammars, Turing machines, the Halting Problem, unsolvable problems. Time complexity, space complexity, complexity classes, P, NP, NP-Complete, PSPACE, EXPTIME. Not open to students who have completed a course in theoretical computer science.

Prerequisite: a course in discrete structures. .

CISC 7224X Formal Languages and Automata Theory

37½ hours plus conference and independent work; 3 credits
Theory of grammars, regular grammars, context-free and context-sensitive grammars, recognizers. Models of computation, finite state machines, pushdown automata, random access stored program machines. Introduction to notions of category theory and its influences.

Prerequisite: Computer and Information Science 7221X or a course in theoretical computer science.

CISC *7226X Information and Computation

37½ hours plus conference and independent work; 3 credits
Introduction to Shannon's information theory. Data compression algorithms: Huffman, dictionary, and predictive approaches. Techniques for different data formats. Information theory and cryptology: theoretical limits. Basic concepts of cryptology. Classic cryptography and cryptanalysis. Modern cryptographic algorithms. Information and the information environment.

Prerequisite: Computer and Information Science 7200X [714X] or 7214X [715X]; and Mathematics 6652X [652X] or a course in probability.

CISC *7228X Quantum Computing

37½ hours, 3 credits
An introduction to quantum computing. Basic mathematical and physical background for quantum computing. Grover's search algorithm. Shor's factoring algorithm. Quantum cryptography. Quantum complexity. Physical implementations of quantum computers.

Prerequisite: Computer and Information Science 7200X [714] and a course in calculus

CISC *7230X Cryptosystems

37½ hours plus conference and independent work; 3 credits
Theoretic tools useful in the study of cryptography: number theory, algebra, probability, computational complexity. Tests for primality. Pseudo-random number generators. Public-key cryptosystems. Arthur-Merlin games and minimum- knowledge protocols.

Prerequisite: Computer and Information Science 7220X [722X] or 7224X [724X].

CISC 7240X Numerical Methods

37½ hours plus conference and independent work; 3 credits

Methods and techniques for solving scientific and mathematical problems on digital computers. Interpolation and approximation. Quadrature. Numerical solution of differential equations. Solution of linear and nonlinear systems. Fast Fourier transform. Computation of eigenvalues and eigenvectors. Error analysis. Emphasis on the machine implementation of numerical algorithms.

Prerequisite: a course in linear algebra and an elementary course in differential equations.

CISC 7300X Computer Systems and Architecture

37½ hours plus conference and independent work; 3 credits
Essentials of computer hardware and systems software. Operating systems fundamentals. Computer hardware and architecture fundamentals. Processor technology. Input/output systems. File systems. Introduction to data and network communications. Distributed systems. Applications development cycle. Systems integration and performance. Introduction to procurement of hardware and software. Computing resource management. (Not open to students who have taken Computer and Information Science 7310X [704X].)

Prerequisite: A course in computer organization or architecture and a course in data structures.

CISC 7302X Computer Architecture

37½ hours plus conference and independent work; 3 credits
Digital circuits and logic design. Gates, registers, counters, bus transfer. The arithmetic unit and machine algorithms for high-speed arithmetic. The control unit. Memory design and the analysis of hierarchical memory systems and their management. Input-output and communication techniques. Microprogramming. Comparison of advanced systems including multiprocessors, stack machines, parallel and pipeline processors, associative computers.

Prerequisite: An undergraduate course in computer organization.

CISC 7310X Operating Systems I

37½ hours plus conference and independent work; 3 credits
Organization and programming of executive control systems. Batch processing, multiprogramming, multiprocessing, and time-sharing systems. File system organization and management. Access and protection control. Resource allocation. Control systems languages. Mathematical models of computer systems. This course requires a substantial amount of programming. (Not open to students who have completed CIS 7300X [703X] or a course in operating systems.)

Prerequisite: Computer and Information Science 6006X [622X] or a course in data structures; and Computer and Information Science 6007X [627X] or an undergraduate course in computer organization.

CISC *7312X Operating Systems II

37½ hours plus conference and independent work; 3 credits
Study of the more advanced aspects of operating systems with emphasis on overall design and system structure. Asynchronous operation and interprocess communication. Network operating systems. Debugging and verification.

Prerequisite: Computer and Information Science 7310X [704X] or a course in operating systems.

CISC *7320X Computer Security

37½ hours plus conference and independent work; 3 credits
Basic concepts of computer security: Security related services: confidentiality, integrity, availability. Threats, security policies and security mechanisms. Cryptographic concepts and terminology. Secure design principles. Information flow and the confinement problem. Life cycle of a secure and trusted system. System evaluation criteria. Trojan horses, worms and viruses. Vulnerability analysis. System auditing. Intrusion detection.

Prerequisite: Math 607 or a course in calculus, Computer and Information Science 7310X [704].

CISC *7330X Teleprocessing Systems

37½ hours plus conference and independent work; 3 credits
Teleprocessing systems and concepts, communications terminology, types of networks, transmission properties, modems, types of terminals, codes, error-control procedures, multiplexing and concentration devices, access methods, network design and performance, security and reliability, backup and fault isolation, message routing, message queueing, message editing, intelligent nodes, virtual teleprocessing access methods.

Prerequisite: Computer and Information Science 7300X [703X] or 7310X [704X] or a course in operating systems; Computer and Information Science 7302X [742.1X] or a course in computer organization; and Mathematics 6652X [652X] or a course in probability and statistics.

CISC *7332X Local Area Networks

37½ hours plus conference and independent work; 3 credits
Local area network (LAN) technology. Topologies and transmission media. LAN protocols. The IEEE 802 standard. High speed LANs. Optical fiber LANs. The FDDI standard. Circuit-switched LANs. LAN performance measurements. The network interface. Internetworking. Network design issues. Commercial systems.

Prerequisite: Computer and Information Science 7300X [703X] or 7310X [704X] or a course in operating systems; Computer and Information Science 7302X [742.1X] or a course in computer organization; and Mathematics 6652X [652X] or a course in probability and statistics.

CISC *7334X Computer Communication Networks

37½ hours plus conference and independent work; 3 credits
Advanced concepts in computer organization and an introduction to the fundamental principles of computer communication networks. Network structure and architecture. The ISO Reference Model. Protocols and their software implementation. Point-to-point, satellite, radio, and local area networks. Routing, congestion, and flow control algorithms. Examples of current networks.

Prerequisite: Computer and Information Science 7300X [703X] or 7310X [704X] or a course in operating systems; Computer and Information Science 7302X [742.1X] or a course in computer organization; and Mathematics 6652X [652X] or a course in probability and statistics.

CISC *7340X Parallel and Distributed Systems

37½ hours plus conference and independent work; 3 credits
A survey of the applications and implementations of parallelism in existing and proposed computing systems. Flynn's classification of computers. Multiprocessor systems, array processors, vector machines, computer clusters and web-computing. Languages for parallel and distributed systems. Operating system issues. Notations expressing concurrency. The semantics of concurrency. Verification rules. Standard problems.

Prerequisite: Computer and Information Science 7100X [701X] and either 7310X [704X] or a course in operating systems.

CISC *7342X Programming Parallel Processors

37½ hours plus conference and independent work; 3 credits
Programming techniques for parallel hardware configurations. Writing portable parallel code. Performance issues. Parallel architectures, parallel languages, and parallel algorithms.

Prerequisite: Computer and Information Science 7312X [705] and 7340X [744].

CISC *7350X Distributed System Administration

37½ hours plus conference and independent work; 3 credits
Installation, configuration, and maintenance of an operating system. Configuration of routers, networks, and subnetworks. Installation, configuration, and maintenance of network utilities such as email, web server, and other services. Use of network diagnostic tools. Identification and repair of network and configuration problems.

Prerequisite: Computer and Information Science 7310X [704X] or a course in operating systems or permission of the chairperson.

CISC *7352X Performance Evaluation of Computer Systems

37½ hours plus conference and independent work; 3 credits
Performance measures and models. Introduction to stochastic processes. Basic queueing analysis. Performance measures of a queueing system. Priority queueing systems. Approximation techniques. Queueing models of computer systems: finite and infinite models. Multiple resource and multiaccess models. Data analysis. Total system analysis.

Prerequisite: Computer and Information Science 7310X [704X] or a course in operating systems; Mathematics 7280X [607X] or two terms of calculus; and Mathematics 6652X [652X] or a course in probability and statistics.

CISC *7354X Topics in Systems Simulation

37½ hours plus conference and independent work; 3 credits
Techniques for the simulation of complex systems; simulation of computer systems. Random number generation, uniformly distributed random numbers, other distributions, tests of randomness. Statistical issues in simulation. Queueing theory, Poisson arrival process, various queue disciplines, single server and multiserver queues. Survey of simulation languages; GPSS and SIMSCRIPT. Simulation methodology.

Prerequisite: Computer and Information Science 6006X [622X] or a course in data structures; and Mathematics 6652X [652X] or a course in probability and statistics.

CISC 7360X Microprocessors

24 hours lecture plus conference; 21 hours laboratory plus independent work; 3 credits
Introduction to microprocessor technology. History and applications. Microprocessor architecture: 8- and 16-bit processors. Examples of commercially available processors. Instruction sets and software development. Microprocessor memory sections. I/O sections and interfacing techniques. Interrupt systems. Single-chip microcomputers and bit-slice processors. Hands-on laboratory experiments. (Not open to students who have taken a graduate or undergraduate course in microprocessors.)

Prerequisite: Computer and Information Science 6007X [627X] or an undergraduate course in computer organization.

CISC 7362X Advanced Microcomputer Applications

37½ hours plus conference and independent work; 3 credits
A survey of advanced microcomputer administrative applications. Use and impact of microcomputer hardware and software. Integrated software and programming, networking, and the automated office. Ethical and societal impact of personal computing.

Prerequisite: Computer and Information Science 6003X [605X] or a course in microcomputer applications.

CISC 7400X Foundations of Cognitive Science

37½ hours plus conference and independent work; 3 credits.
Bases for intelligent behavior in humans, animals, and machines. Human and machine intelligence are compared with respect to visual perception, speech perception, language comprehension, learning, and other adaptive mechanisms. This course is the same as Psychology U7753X [752.2X].

Prerequisite: a course in probability and statistics; and knowledge of a high-level programming language such as C, Pascal, PL/I, or LISP.

CISC 7410X Artificial Intelligence I

37½ hours plus conference and independent work; 3 credits
Techniques for making machines exhibit intelligent behavior. Topics covered are taken from the areas of problem solving, perception, game playing, knowledge representation, natural language understanding, programs that learn (adaptive programs), expert systems, and programming languages for work in artificial intelligence. This course requires a substantial amount of programming. (Not open to students who have taken an undergraduate course in artificial intelligence.)

Prerequisite: Computer and Information Science 6006X [622X] or a course in data structures.

CISC *7412X Artificial Intelligence II

37½ hours plus conference and independent work; 3 credits
A second-level course in artificial intelligence. Topics discussed will be taken from the areas of knowledge representation, logic and logic programming, pattern-directed inference, reasoning with uncertain or unreliable knowledge, natural language processing, computer vision, machine architecture, and programming languages for artificial intelligence.

Prerequisite: Computer and Information Science 7410X [716X] or a course in artificial intelligence.

CISC *7414X Expert Systems

37½ hours plus conference and independent work; 3 credits
Study of systems that apply expertise in specific domains to make analyses and recommendations. The theory, design, and application of such systems will be discussed. Topics include: rule-based systems, inference engines, dealing with uncertainties, user interactions and knowledge engineering, knowledge acquisition, knowledge representation, induction and learning systems, limits of expert systems. Some current expert systems will be discussed. Students will build a simple expert system as a term project.

Prerequisite: Computer and Information Science 7410X [716X] or a course in artificial intelligence.

CISC *7420X Logic in Computer Science

37½ hours plus conferences and independent work; 3 credits
Predicate calculus, semantics, models, proof systems and completeness theorems, Herbrand's Theorem, resolution-based theorem proving, applications to automated reasoning, applications to logic programming.

Prerequisite: Computer and Information Science 6004X [611X] or a course in discrete structures; and 6006X [622X] or a course in data structures.

CISC 7422X Game Theory and Social Choice

37½ hours plus conference and independent work; 3 credits
A comprehensive introduction to the mathematical and logical techniques relevant to understanding the structure of social algorithms (social software). The study of social institutions, including electoral systems, using techniques from mathematics and computer science, including probability, game theory, and logic. (This course is the same as Mathematics 7580X [612X].)

Prerequisite: Computer and Information Science 6004X [611X] or its equivalent

CISC 7430X Natural-Language Processing

37½ hours plus conference and independent work; 3 credits
The study of natural-language processing including linguistic theory, the formal theory of languages, and psycholinguistic investigations into human natural-language processing, both from the point of view of modeling human processing and of developing practical systems for machine processing of natural-language material. This course is the same as Psychology U7754G [752.3G].

Prerequisite: Computer and Information Science 6006X [622X] or a course in data structures.

CISC *7440X Pattern Recognition and Neural Networks

37½ hours plus conference and independent work; 3 credits
Introduction to fundamental concepts and methods in pattern recognition. Statistical decision-theoretic techniques, cluster analysis, feature selection, and recognizing patterns with nonnumeric features. The generalized perceptron, feedforward multilayer neural networks, network associative memories, self-organizing neural networks for pattern recognition.

Prerequisite: Mathematics 7280X [607X] or one year of elementary calculus; Mathematics 6652X [652X] or a course in probability theory; and Computer and Information Science 7410X [716X] or a course in artificial intelligence.

CISC *7442X Robot Vision

37½ hours plus conference and independent work; 3 credits
Introduction to the fundamentals of natural and computer vision. Image formation and the digital representation of images. Early vision and techniques of segmentation. Representation of shape and texture. Data structures for scene representation. Knowledge representation and its relation to image understanding.

Prerequisite: Computer and Information Science 7440X [734X] or 7650X [769X].

CISC *7450X Computer Applications in Health Sciences

45 hours; 3 credits
Use of computers in health-related fields. Understanding unique theoretical and practical applications to health science research, education, and clinical practice. Course includes projects tailored to the interests of individual students. This course is the same as Health and Nutrition Sciences 7161X [777X].

Prerequisite: one 7000-level course in health and nutrition sciences and one 7000-level course in computer and information science.

CISC 7500X Introduction to Management Information Systems

37½ hours plus conference and independent work; 3 credits
The role of people, computers, and communications in management information systems. Feasibility studies. Analysis of information and processing requirements, processing methods, data management, and implementation strategies for on-line, database, and integrated systems and for control of operations. Models of decision making. Economics of information, methods of evaluating alternative courses of action.

Prerequisite: CIS 3110 [15] or a course in advanced programming techniques.

CISC 7510X Database Systems

37½ hours plus conference and independent work; 3 credits
Introduction to database systems. Comparison to file processing systems. Data models. Relational, hierarchical, and network systems. Database design. Normal forms. Study of several real-world database management systems, with an emphasis on microcomputer applications. Database recovery, query and transaction processing, concurrency. Distributed and object-oriented databases. This course requires a substantial amount of programming. (Not open to students who are enrolled in or have completed Computer and Information Science 3810 [45].)

Prerequisite: Computer and Information Science 6006X [622X]; and 6003X [605X] or knowledge of a database management system.

CISC *7512X Advanced Database Systems

37½ hours plus conference and independent work; 3 credits
Advanced aspects of database systems. Topics are chosen from such advanced topics as dimensional modeling, data warehouse design, data mining, XML integration, geographic information systems, and spatial and temporal data types

Prerequisite: Computer and Information Science 7510X [717.1X] or its equivalent.

CISC 7520X Requirements Modeling for Information Systems

37½ plus conference and independent work; 3 credits
Analyzing and managing business requirements for information systems. Translating business requirements into industry-standard documents. Documentation, analysis and improvement of business processes using Unified Modeling Language (UML). Managing and tracing software requirements throughout the project lifecycle.

Prerequisite: A course in data structures.

CISC 7522X Systems Analysis and Design

37½ hours plus conference and independent work; 3 credits
Fundamental concepts of systems, principles of modeling, use of feedback, hierarchical structures, systems complexity and simplification. Database systems concepts, database design, analytical and experimental methods for computer systems analysis, system performance evaluation, throughput determination.

Prerequisite: Computer and Information Science 6006X [622X].

CISC *7530X IT Project Management

37½ hours plus conference and independent work; 3 credits
The project and the role of the project manager. Project life cycle and phases of a project. The project management plan, obtaining stakeholder buy-in, integrating business and IT expertise into the design. Managing an ongoing project, change control and scope-creep management. Time management scheduling using time management software -- Gantt charts, Critical Path Method (CPM) and Program Evaluation and Review Technique (PERT). Cost estimation, project budgeting and cost control. Quality control tools and techniques. Building, managing and motivating a project team. Monitoring and managing risk. Bringing a project to closure.

Prerequisite: Computer and Information Science 7500X [757X]

CISC 7532X Information Systems Management

37½ hours plus conference and independent work; 3 credits
Management of the systems development, maintenance/enhancement, technical support, telecommunications, and operational functions of I/S, including project planning and control, make:buy analysis, and other methods of evaluating alternative courses of action; information systems portfolio assessment. Emphasis on the tactical (short-term) aspects of I/S.

Prerequisite: Computer and Information Science 7500X [757X].

CISC 7534X Information Systems Planning and Policy

37½ hours plus conference and independent work; 3 credits
The information system (I/S) unit and function as a component of the overall organization. The use of I/S by organizations to gain competitive advantage. Alternative methods for positioning, structuring, and controlling information systems for effectiveness and efficiency. I/S planning strategies and methodologies; roles for steering committees. Emphasis on the strategic (or long-term) aspects of the I/S function, within the organization, in its dealing with suppliers, competitors, and customers/clients, and in its impact on society.

Prerequisite: Computer and Information Science 7500X [757X].

CISC *7540X Software Methodology

37½ hours plus conference and independent work; 3 credits
Techniques for the design, implementation, maintenance, and management of very large software systems. The relation between size and complexity. Goals and measurements. Design and implementation strategies. Testing, validation, and proofs of correctness. Language aspects. Design and implementation tools. Asynchronous and real-time systems. Project management.

Prerequisite: Computer and Information Science 7510X [717.1X] and two courses chosen from among Computer and Information Science 7522X [765X], 7532X [759X] and 7534X [758X] .

CISC *7610X Multimedia Databases

37½ hours plus conference and independent work; 3 credits
Multimedia data types and formats. Multimedia database design issues. Indexing and retrieval of text documents, audio files, images and video. Techniques and data structures for efficient multimedia similarity search. System support for distributed multimedia databases. Measurement of multimedia information retrieval effectiveness. Products, applications, and new developments.

Prerequisite: Computer and Information Science 7510X [717.1X] or a course in database systems.

CISC 7620X Computer Graphics: Software System Design

37½ hours plus conference and independent work; 3 credits
Design of languages and software systems for computer graphics. Elementary raster and vector graphics primitives. Device independent graphics. Geometrical concepts. Internal representation. Transformations. Modeling. Three-dimensional considerations. Pictorial realism. Hierarchical program structure. Alternative approaches.

Prerequisite: Computer and Information Science 6006X [622X] or a course in data structures.

CISC *7622X Algorithms for Computer Graphics

37½ hours plus conference and independent work; 3 credits
Survey of nonnumerical and seminumerical algorithms of computer graphics. Underlying hardware concepts. Raster scan principles. Line and circle drawing algorithms. Graphic data compression. Character display. Polygon filling. 2D and 3D clipping. Polygon decomposition. Removal of hidden lines and surfaces. Shading and other rendering of illumination. Shape and pattern description.

Prerequisite: Computer and Information Science 7620X [741X] or a course in computer graphics.

CISC *7630X Multimedia Computer Systems

37½ hours plus conference and independent work; 3 credits
In-depth study of major issues and recent trends in multimedia. Multimedia systems architecture. Multimedia database systems, presentation systems, and conferencing systems. Multimedia file management and information models. Scheduling and synchronization. Data compression. Image analysis and content-based retrieval. Distributed multimedia. Authoring. Quality of service and multimedia systems design. Applications of multimedia systems. Students will read, report on, and implement techniques and ideas described in the current multimedia research literature.

Prerequisite: One of the following: Computer and Information Science 7302X [742.1X], 7310X [704X], 7334X [749X], 7510X [717.1X], 7620X [741X], 7640X [752X], 7650X [769X].

CISC 7640X Multimedia Presentations

37½ hours plus conference and independent work; 3 credits
Design and implementation of multimedia presentations. Topics include hardware and software aspects of multimedia systems, standards of multimedia storage, compression techniques, authoring fundamentals, multimedia development and the Internet, and current research topics in multimedia-based applications. Students will build a multimedia application using prescribed authoring software.

Prerequisite: Computer and Information Science 6006X [622X] or a course in data structures.

CISC 7642G Advanced Digital Art

37½ hours plus conference and independent work; 3 credits
Techniques of incorporating viewer intervention into a perceptual environment. Interactive art possibilities and venues, including site-specific installations (custom interface design and physical computing) and network based work (VRML or Quicktime VR). This course is the same as Art 7821G [779G].

Prerequisite or corequisite: matriculation for the M.A. degree, art teacher (all grades), or matriculation for the M.F.A. degree in art, or Computer and Information Science 7620X [741X] or 7640X [752X].

CISC *7650X Digital Signal Processing

37½ hours plus conference and independent work; 3 credits
An introduction to discrete time signals and their spectral representation. The concept of sampling and the relationship between continuous signals and their representation on a digital computer. The design of computer algorithms using techniques of digital signal processing for application in digital filter design, digital picture processing, and speech recognition and synthesis.

Prerequisite: Mathematics 7280X [607X] or two terms of calculus; and Computer and Information Science 7200X [714X] or a course in analysis of algorithms.

CISC 7900X Research Project I

Minimum of 90 hours of independent work each term; 3 credits each term
Development of computer systems supervised by a staff member. Students work individually or in groups and are expected to prepare a detailed report describing the project and its contributions.

Achievement is measured by demonstrable attainment of the project's goals.

Prerequisite: permission of the chairperson.

CISC 7902X Research Project II

Minimum of 90 hours of independent work; 3 credits
Development of computer systems supervised by a staff member. Students work individually or in groups and are expected to prepare a detailed report describing the project and its contributions. Achievement is measured by demonstrable attainment of the project's goals.

Prerequisite: Computer and Information Science 7900X [790X].

CISC 7940X Seminar in Computer Science I

37½ hours plus independent work; 3 credits
Readings, discussions, and reports on topics in computer science.

CISC 7942X Seminar in Computer Science II

37½ hours plus independent work each term; 3 credits each term
Readings, discussions, and reports on topics in computer science.

Prerequisite: Computer and Information Science 7940X [780.1X].

CISC 7950X Advanced Seminar in Computer Science I

37½ hours plus independent work; 3 credits
Readings, discussions, and reports on advanced topics in computer science.

CISC 7952X Advanced Seminar in Computer Science II

37½ hours plus independent work; 3 credits
Readings, discussions, and reports on advanced topics in computer science.

Prerequisite: Computer and Information Science 7950X [785.1X], 7900X [790X], or 7902X [791X]

CISC 7990G Thesis Research

Hours to be arranged; 3 credits
Research for the master's thesis supervised by a faculty member. No more than 6 credits may be counted toward the degree. Credit is not earned until the thesis is accepted.

Prerequisite: permission of the chairperson.

CISC 7992G Thesis Research

Hours to be arranged; 3 credits
Research for the master's thesis supervised by a faculty member. No more than 6 credits may be counted toward the degree. Credit is not earned until the thesis is accepted.

Prerequisite: CISC 7990G and permission of the chairperson.

CISC 7994G Thesis Research

Hours to be arranged; 2 credits
Research for the master's thesis supervised by a faculty member. No more than 6 credits may be counted toward the degree. Credit is not earned until the thesis is accepted.

Prerequisite: CIS 7992 and permission of the chairperson.

Early Childhood Education/Art Education

Department office: 2309 James Hall
Phone: 718.951.5205

Full-time Faculty

Professor: Bedford
Associate Professors: DeBey, Jiesamfoek, Louis, Shannon
Assistant Professors: Ferholt, Lauterbach, Li, McFadden, Pace Miles, Song
Instructor: Morales-Alexander

M.S. in Education degree program: early childhood education teacher (birth through grade 2) HEGIS code 0823; SED program code 26736

The program in early childhood education prepares reflective teachers of children from birth through grade 2. Within our degree program, additional extensions and certificates may be added to the base of an early childhood teaching certificate by meeting NYSED requirements. These include: extensions in Bilingual Education in EC, Gifted Education in EC as well as an additional certification in Students with Disabilities (birth to 2nd grade). See specific course requirements noted below.

Our Early Childhood Program considers child development (typical and atypical) within the contexts of families, communities, and early learning settings in urban environments. Our graduates are keen observers of children who deeply understand and can document and articulate how children grow and develop. They successfully teach and guide young children in partnership with families from culturally, linguistically and socially diverse backgrounds using developmentally effective and culturally sensitive practices based on a family-centered and relationship-based philosophy.

Fundamental to the program's philosophy is a commitment to providing and advocating for linguistic and cultural developmentally effective practices, the arts and children's play as central to quality education for all young children, and the inclusion of children with special needs and English language learners. Based on the continual expansion of knowledge, our curriculum is vibrant and addresses emerging issues in the field. This includes bridging students' fieldwork and clinical experiences with current theories and research in child development, infant mental health, and early childhood education. Our coursework integrates the latest research in infancy, neuropsychology, social and emotional development, parenting and families, curriculum design, authentic assessment, emergent bilingual language development, number development, science inquiry, and technology.

Students are encouraged to push the boundaries of what is known about child development and early childhood education, as witnessed in our partnership with Lincoln Center Education, in which Brooklyn College students explore the relationship between imaginative learning and early childhood educational practices. We also prepare our students to teach in high-need communities through strong relationships with neighborhood early childhood programs and schools and our partnership with JumpStart, a non-profit organization that recruits and trains college students' to provide a rich literacy-based curriculum to preschool children and their parents in low-income neighborhoods. Faculty and students are currently involved in international partnerships and research in Sweden and China.

Our Undergraduate and Graduate Early Childhood Education Programs are nationally recognized by the National Association for the Education of Young Children as part of the School of Education's national accreditation by the National Council for Accreditation of Teacher Education (NCATE).
Students will enroll in the appropriate course of studies listed below (Option A or B or C) based upon teaching experience, previous course work, and the teaching certificates they hold.

Students will enroll in the appropriate course of studies listed below (Option A or B or C) based upon teaching experience, previous course work, and the teaching certificates they hold.

Option (A): 30 credits

The following program applies to students who hold a New York State Initial Certificate in Early Childhood Education (birth through grade 2) or its equivalent. This program leads to a New York State Professional Certificate in Early Childhood Education (birth through grade 2).

Matriculation requirements

Applicants must hold a New York State Initial Certificate in Early Childhood Education (birth through grade 2) or its equivalent.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate education courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 575 on the paper-based test or 233 on the computer-based test or 79 on the internet-based test, to be considered for

admission. Applicants are interviewed and may be required to demonstrate written proficiency in English.

Although not mandatory as a requirement for admission, applicants are encouraged to submit GRE scores as additional evidence to support the application.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements

Students must complete 30 credits in the following courses.
Early Childhood and Art Education 7101T; 7102T or 7114T; 7107T; 7678T; 7103T; 7110T; and four courses from the following: Early Childhood and Art Education 7013T or 7100T or 7104T or 7113T or 7111T or 7115T or 7116T or 7108T or 7105T or 7106T or 7114T or 7109T or 7359T or 7360T or 7361T or 7382T or 7530T or 7551T or 7652T or 7663T or 7667T or 7668T or 7669T or 7670T or 7675 or 7682T or 7683T or 7695T or 7820T or 7885T or 7886T or 6002T or Puerto Rican and Latino Studies 7145X.

During the first semester, students must file a program of study approved by the Graduate Early Childhood Education program coordinator. All courses in the early childhood degree sequence require departmental permission for registration.

Early Childhood and Art Education 7103T and 7110T are taken consecutively the last two semesters of the student's program of study.

Students must obtain fingerprinting clearance. Fieldwork or student-teaching in an early childhood setting requires students to be fingerprinted by New York City Department of Investigation or Department of Health. Fieldwork/student-teaching in a public school requires students to be fingerprinted by the New York City Department of Education (NYC DOE); See SOE website for more information.

Option (B): 33 credits

The following program applies to students who hold a New York State Initial Certificate in Childhood Education (grades 1-6) or its equivalent or a New York State Initial Certificate in Special Subjects (all grades) or its equivalent. This program leads to a New York State Professional Certificate in Early Childhood Education (birth through grade 2).

Matriculation requirements

Applicants must hold a New York State Initial Certificate in Childhood Education (grades 1-6) or its equivalent or a New York State Initial Certificate in Special Subjects (all grades) or its equivalent.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate education courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 575 on the paper-based test or 233 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Applicants are interviewed and may be required to demonstrate written proficiency in English.

Although not mandatory as a requirement for admission, applicants are encouraged to submit GRE scores as additional evidence to support the application.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements

Students must complete 33 credits in the following courses.
Early Childhood and Art Education 7101T; 7102T; 7100T; 7104T; 7111T or 7115T or 7663T; 7116T or 7108T or 7105T or 7106T or 7107T or 7360T or 7652T; 7109T; 7120T; 7103T; 7110T.

During the first semester, students must file a program of study approved by the program adviser. All courses in the early childhood degree sequence require departmental permission for registration.

Early Childhood and Art Education 7103T and 7110T are taken consecutively the last two semesters of the student's program of study.

Students must obtain fingerprinting clearance. Fieldwork or student-teaching in an early childhood setting requires students to be fingerprinted by New York City Department of Investigation or Department of Health. Fieldwork/student-teaching in a public school requires students to be fingerprinted by the New York City Department of Education (NYC DOE); See SOE website for more information.

Throughout student-teaching, students complete and submit their final NYS certification exam, Teacher Performance Assessment (EdTPA), which involves submitting video clips of teaching, lesson plans, and other assessment material (see SOE website for additional information).
Note: A student must complete student teaching with a B or higher, students who receive a grade lower than a B must apply to the ECAE chairperson for permission to reregister to repeat student teaching. Students will be allowed to repeat an ECAE course (including student-teaching) only once.

Option C: 45 credits

The following program applies to students who do not hold a New York State Initial Certificate in Early Childhood Education or Childhood Education or Special Subjects or equivalent course work and teaching experience, or who are teaching but do not hold initial certification. This program leads to both New York State Initial and Professional Certificates in Early Childhood Education.

Matriculation requirements

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate education courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 575 on the paper-based test or 233 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Applicants are interviewed and may be required to demonstrate written proficiency in English. Also, although not mandatory as a requirement for admission, applicants are encouraged to submit scores on the New York State teacher certification Academic Literacy Skills Test (ALST) as evidence to support the application.

Although not mandatory as a requirement for admission, applicants are encouraged to submit scores on the CST-multi-subject Early Childhood: Arts and Sciences section (which is required to receive a NYS certificate in Early Childhood Education) as additional evidence to support the application.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements

Students must complete 45 credits in the following courses.

Early Childhood and Art Education 7675T; 7101T; 7102T; 7103T; 7104T; 7105T or 7106T or 7652T; 7107T; 7108T; 7109T; 7110T; 7111T; 7115T; 7116T; 7120T.

During the first semester, students must file a program of study approved by the Graduate Early Childhood Education program coordinator. All courses in the early childhood degree sequence require departmental permission for registration.

Early Childhood and Art Education 7103T and 7110T are taken consecutively the last two semesters of the student's program of study.

Students must obtain fingerprinting clearance. Fieldwork or student-teaching in an early childhood setting requires students to be fingerprinted by New York City Department of Investigation or Department of Health. Fieldwork/student-teaching in a public school requires students to be fingerprinted by the New York City Department of Education (NYC DOE); See SOE website for more information.

Maintain matriculated status. Students must have taken and passed the following NYS exams at the specified transition points:
1) CST-EC Arts & Sciences section: prior to completing 18-credits;
2) The Educating All Students (EAS) exam: prior to completing 24-credits;
3) The CST-EC Literacy and Math sections: prior to student-teaching.
4) Throughout student-teaching, students complete and submit their final NYS certification exam, Teacher Performance Assessment (EdTPA), which involves submitting video clips of teaching, lesson plans, and other assessment material (see SOE website for additional information).

A student must complete student teaching with a B or higher, students who receive a grade lower than a B must apply to the ECAE chairperson for permission to reregister to repeat student teaching. Students will be allowed to repeat an ECAE course (including student-teaching) only once.

Note. Students not working toward certification must schedule a meeting with the Graduate Early Childhood Program Coordinate to set up an alternative transition point plan during their initial semester.

Requirements for the Extension in Bilingual Early Childhood Education
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The New York State Education Department Extension in Bilingual Education may be added to base of an early childhood teaching certificate by meeting New York State Education Department criteria for the Bilingual Extension. New York State requirements for the Early Childhood Bilingual Extension includes the following coursework: Early Childhood and Art Education 7100T, 7116T, 7359T, and 7361T; and 7360T or Puerto Rican and Latino Studies 7145X. Permission from the Graduate Early Childhood Education program coordinator is required.

Nonmatriculated students

Students with a New York State Initial Certificate in Early Childhood Education and/or a New York State Professional Certificate in Early Childhood Education or their equivalents who wish to complete an Extension in Bilingual without completing a master's degree in Early Childhood Education, may do so as a nonmatriculated student. The Bilingual Extension in Early Childhood Education consists of 15 credits. The required courses, which may be taken in any order include: ECAE 7100T, 7116T, 7359T, and 7361T; and 7360T or Puerto Rican and Latino Studies 7145X. Permission from the Graduate Early Childhood Education program coordinator is required.

Requirements for the Extension in Gifted Education Early Childhood Education

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The New York State Education Department Extension in Gifted Education may be added to the base of an early childhood teaching certificate by meeting New York State Education Department criteria that includes the following 12 credits of coursework: Early Childhood and Art Education 7667T, 7668T, 7669T, and 7670T. Permission from the Graduate Early Childhood Education program coordinator is required.

Requirements for the Extension in Students with Disabilities (SWD) in Early Childhood Education

The New York State Education Department Extension in Students with Disabilities may be added to the base of an early childhood teaching certificate by meeting New York State Education Department requirements that include 15 credits of coursework:
Early Childhood and Art Education 7101T, 7102T, 7104T, 7113T, and 7678T.
Permission from the Graduate Early Childhood Education program coordinator is required.

During the first semester, students must file a program of study approved by the Early Childhood Education program coordinator. All courses in the early childhood degree sequence, the early childhood bilingual extension, the early childhood gifted extension, and the early childhood students with disabilities extension require departmental permission for registration.

M.A. degree program in education: art teacher (all grades)
HEGIS code 0831; SED program code 26751

The art education program at Brooklyn College is committed to preparing quality art teachers (K-12) who are skilled makers of art, insightful observers of visual culture, and articulate advocates for art education in public and independent schools. For students who hold a bachelor's degree from an accredited institution in either art or art education, we offer two master of arts degrees in art education. For students who already hold a master's degree in art or related discipline, we offer a non-degree teaching certificate. The curriculum consists of education courses, field experiences, a sequence of art studios that are scheduled to accommodate students who have family and/or professional responsibilities. Most students complete the program in two years, however individuals are free to set their own pace for progressing through the program.

The courses required by the School of Education vary depending on the entry qualifications of students. The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the program coordinator of art education for current degree requirements.

Matriculation requirements

Applicants must offer at least 30 credits in art history and studio or basic- design courses, both two-dimensional and three-dimensional, and drawing and painting, sculpture and crafts, and other advanced courses acceptable to the program in art education.

Applicants must offer (a) or (b) or (c):

(a) New York State Initial Certification in teaching art for all grades;

(b) courses in education that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching art in all grades; 100 hours of fieldwork; 40 days or 300 hours of student teaching of art in all grades, or one year of full-time teaching of art in all grades.

(c) an undergraduate degree with a major in art or appropriate course work in art.
Applicants must have a minimum undergraduate scholastic index of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the program coordinator of art education and the chairperson of the Early Childhood and Art Education Department.

Applicants are required to demonstrate written proficiency in English. Also, although not mandatory as a requirement for admission, applicants are

encouraged to submit scores on the New York State teacher certification Academic Literacy Skills Test (ALST) as evidence to support the application.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of at least 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Applicants must submit a digital portfolio of their art work.

Applicants must consult matriculation requirements for the program in art education in the School of Education section of the Bulletin, and should see the program coordinator for art education for counseling.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

33-46 credits are required for the degree.

Students must complete Art 7310X, 7520X and 7610X.

Students must complete 6 additional credits in studio art or art history courses.

Students must complete 18-31 credits in courses in the School of Education.

Students take different education courses and sequences of courses depending on their previous course work, teaching experience, and the certificates they hold.

Students who possess Initial Certification in teaching art must complete 15 credits in Group II and 3 credits in Group III, below.

Students who do not possess Initial Certification in teaching art or equivalent course work and teaching experience or who are teaching but do not possess Initial Certification in teaching art must have the appropriate course work and credits in the subject area and must complete the appropriate courses in Group I in addition to courses in Groups II and III, below.

Students pursuing Initial Certification in teaching art must take Secondary Education 7503X, Teaching Writing Across the Curriculum; Childhood, Bilingual and Special Education 7671X, Children and Youth with Special Needs, or Secondary Education 7671X, Children and Youth with Special Needs, or Early Childhood Education and Art Education 7104T, Environments for Infants, Toddlers and Young Children with Special Developmental and Learning Needs, or Early Childhood Education and Art Education 7652T, Teaching Young Children with Special Needs through the Arts in Group III.

Students who already have a master's degree but wish Initial Certification in teaching art must take appropriate courses for the Advanced Certificate in Art Education in Group I, II and III below, as determined at the time of matriculation by the program coordinator of art education in the Department of Early Childhood and Art Education in the School of Education.

Group I:
Early Childhood and Art Education 7538T, 7542T, 7520T, 7543T.

Group II:
Early Childhood and Art Education 7530T, 7507T, 7533T, 7526T, 7506X.

Group III:
One of the following: Childhood and Special Education 7671X, Secondary Education 7527T, 7503X, 7549X/Theater 7141X, Secondary Education 7671X, Early Childhood and Art Education 7100T, 7101T, 7102T, 7104T, 7105T, 7106T, 7652T, 6002T.

Students must obtain fingerprinting clearance. Fieldwork or student-teaching in an early childhood setting requires students to be fingerprinted by New York City Department of Investigation or Department of Health. Fieldwork/student-teaching in a public school requires students to be fingerprinted by the New York City Department of Education (NYC DOE); See SOE website for more information.
Maintain matriculated status. Students must have taken and passed the following NYS exams at the specified transition points:
1. CST-Visual Art section: prior to student teaching;
2. The Educating All Students (EAS) exam: prior to completing the degree program;
3. Throughout student-teaching, students complete and submit their final NYS certification exam, the Teacher Performance Assessment (EdTPA), which involves submitting video clips of teaching, and lesson plans along with commentaries on planning, instruction and assessment (see SOE website for additional information).
A student must complete student teaching with a B or higher, students who receive a grade lower than a B must apply to the ECAE chairperson for permission to reregister to repeat student teaching. Students will be allowed to repeat an ECAE course (including student-teaching) only once.

Note. Students not seeking certification must schedule a meeting with the Graduate Art Education Program Coordinator to set up an alternative transition point plan during their initial semester.

Advanced certificate in art education
HEGIS code 0831; SED program code 36856

The Advanced Certificate in Art Education (25-credits) is a non-degree path leading to a teaching certificate for students who already hold a Master's degree in art or an appropriate discipline, or an MFA. The curriculum consists of education courses, field experiences, to accommodate students who have family and/or professional responsibilities. Most students complete the program in two years; however, individuals are free to set their own pace for progressing through the program.

This program is open to both Masters and MFA students.

By completing this Advanced Certificate program, students will learn about integrating multiple perspectives of teaching art by understanding human functioning and development across art education (K-12) domains, and culture.

Matriculation requirements:

Entrance requirements for acceptance include an earned graduate degree with a grade point average of at least 3.0. Applicants must have completed a graduate degree in art or related field. Additional courses may be required prior to admission to remedy any deficiency in a prospective student's ability to meet matriculation requirements.

Applicants must submit a digital portfolio of their art work.

Program Requirements:

The 25-credit Advanced Certificate is a masters or post-masters and requires nine sequential courses that currently exist in the ECAE department:

ECAE 7506X Projects in Creative Art for the Classroom, 3 credits

ECAE 7530T Diverse Classrooms in a Visual Culture, 3 credits

ECAE 7507T Critical Issues in Education--Social Values and Individual Needs, 3 credits

ECAE 7533T Advanced Seminar in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Art, 3 credits

ECAE 7538T Seminar I in Pedagogy and Curriculum: Art, 3 credits

ECAE 7542T Art Education Student Teaching Practicum I, 2 credits

ECAE 7520T Teaching Seminar II in Pedagogy and Curriculum, 3 credits

ECAE 7543T Art Education Student Teaching Practicum II, 2 credits

CBSE 7671X or SEED 7671X Children and Youth with Special Needs, or ECAE 7104T Environment for Infants, Toddlers, and Young Children with Special Needs; 3 credits

Students must obtain fingerprinting clearance. Fieldwork or student-teaching in an early childhood setting requires students to be fingerprinted by New York City Department of Investigation or Department of Health. Fieldwork/student-teaching in a public school requires students to be fingerprinted by the New York City Department of Education (NYC DOE); See SOE website for more information.
Maintain matriculated status. Students must have taken and passed the following NYS exams at the specified transition points:
1) CST-Visual Art section: prior to student teaching;
2) The Educating All Students (EAS) exam: prior to completing the degree program;
3) Throughout student-teaching, students complete and submit their final NYS certification exam, Teacher Performance Assessment (EdTPA), which involves submitting video clips of teaching, lesson plans, and other assessment material (see SOE website for additional information).
A student must complete student teaching with a B or higher, students who receive a grade lower than a B must apply to the Graduate Art Education Coordinator for permission to reregister to repeat student teaching. Students will be allowed to repeat an ECAE course (including student-teaching) only once.

Advanced certificate in early intervention and parenting
HEGIS code 0823.00; SED program code 36844

The Advanced Certificate in Early Intervention and Parenting program (18-credits) is clinically rich, with an emphasis on relationship-based and evidence-based, family-centered practices, the parent-infant dyad and infant mental health, typical and atypical development, and a trans-disciplinary approach to working in partnership with culturally diverse families with infants and toddlers with disabilities (or at-risk for developmental delays).

This program is open to both master's students and post-master's professionals including early childhood educators, early childhood special

instructors, mental health professionals, speech and language pathologists, occupational therapists, and physical therapists currently working in Early Intervention (EI) and in other early childhood and family settings. For graduate students across disciplines, this unique program aims to support the next generation of EI professionals to develop expertise in early childhood development and effective family-centered, best practices. For early childhood professionals, already competent and working in the field, to integrate their professional knowledge and skills with family-centered, best practices that will enhance the parent-child relationship, support children's development, and help prevent long-term developmental delays.

By completing this Advance Certificate program, both students and skilled professionals will learn about integrating multiple perspectives by understanding children's functioning and development across domains as well as working with caregivers and their children within the context of the families' concerns, priorities, and culture.
Note: To qualify as a Special Instructor for the Early Intervention Program (EIP), a certification in students with disabilities (SWD; Birth - Grade 2) is required. To obtain additional certification in SWD, Birth - Grade 2, students are required to complete the following ECAE courses: ECAE 7101, 7102, 7104, 7113 and 7678 and pass the required CST-Students with disabilities exam. Completion of the EI Advanced Certificate prepares professionals to work with infants and toddlers with disabilities and their families in their homes. Students are advised to meet with EC Graduate program coordinator for guidance.

Matriculation requirements:

Entrance requirements for acceptance include an earned baccalaureate degree with a grade point average of at least 3.0 in the undergraduate major, and a minimum overall grade point average of 3.0. Applicants must have completed an undergraduate or graduate degree in early childhood special education, occupational therapy or related field. Applicants must present coursework or equivalent work experience in knowledge of child development and foundations in special education. Additional courses may be required prior to admission to remedy any deficiency in a prospective student's ability to meet matriculation requirements.

Degree Requirements:

The 18-credit Advanced Certificate is a masters or post-masters and requires six sequential courses:

ECAE 7663T Communication Development and Assessment of Young Multilingual Children with and without Special Needs, 3 credits

ECAE 7675T Supporting Diverse Families and Parent-Child Relationships, 3 credits

ECAE 7678T Developmental and Educational Assessment of Infants and Young Children with Special Needs, 3 credits

ECAE 7683T Typical and Atypical Physical Development in Infants, Toddlers and Young Children: Prevention and Early Intervention, 3 credits

ECAE 7885T Advanced Human Development I: Psychosocial Development in Early Childhood, 3 credits

ECAE 7886T Advanced Human Development II: Parent-Child Interactions, 3 credits

This certificate requires 280 hours of supervised clinical fieldwork (and reflective supervision) in families' homes as well as center-based programs and hospitals. It is designed to be completed in one year (summer, fall, spring, summer).

Note: Students must obtain fingerprinting clearance. See School of Education Web site for more information.

Courses

ECAE 6002T Current Issues and Evidence-based Practices in Education
15 hours; 1 credit
Current issues, strategies, and techniques of evidence-based professional practices in teaching. Course content varies from term to term. This course is not creditable toward the degrees in education.

ECAE 7008T Learning Theories and Early Education
30 hours plus independent work; 3 credits
Current theories and research of learning (believing, knowing, thinking, understanding) and memory during early childhood. Analysis of the concept of learning in educational theory and practice. Implications of children's learning and memory in teaching.

ECAE 7013T Developmental and Temperamental Challenges in Young Children
45 hours; 3 credits
Dynamic aspects of temperament and development in early childhood. Children's emotional and behavior challenges in the family, home and school environment. Clinical methods in diagnosing and treating young children with difficult temperaments, emotional and behavioral difficulties or other developmental challenges. Study and evaluation of typical case materials. Early childhood teacher's role in understanding and dealing with young children with difficult temperaments and behavior or developmental challenges.

ECAE 7037T Teaching Vocabulary across the Curriculum in Early Childhood Classroom
30 hours lecture, 30 hours laboratory; 3 credits
Methods and techniques of vocabulary improvement in the early childhood classroom setting. Application to classroom practice of the

study of the English language, the science of lexicography, and principles of etymology and semantic change. Analysis of selected words and word roots across content areas taught in early childhood education with special emphasis on vocabulary development and the nature of language.

ECAE 7100T Seminar in Principles, Practices and Environments in Early Childhood Settings, including Dual Language and Special Education
45 hours; 3 credits
Analysis of case studies, research, classroom interactions, and environments as related to early childhood teacher practice with culturally and linguistically diverse young children, including children with special needs. The development of an integrated curriculum (math, science, literacy, social studies and the use of technology) emphasizing enduring understandings and standards within developmentally appropriate practices context. Selected current issues in classroom organization and design for early childhood, early childhood dual language and early childhood special education classrooms. Development of a reflective approach to teaching; individualized instruction, organizing for effective support, and guidance of learning.

ECAE 7101T Infant and Child Development in Family, Community and Educational Contexts: Typical and Atypical
30 hours plus conference; 3 credits
Advanced seminar that focuses on observing, assessing, and understanding typical and atypical child development from birth through grade two, as well as prenatal development. Childrearing and early education in diverse family and cultural contexts, with a focus on urban settings. Theoretical approaches to understanding child development, including English language learners and an examination of the developmental nature, causes, and characteristics of young children with special needs, including children with autism; parental ethnotheories; the interactive relationship between the child and the social context. Culture and early childhood education practice from a comparative perspective; teacher-child and peer relationships; including children with special needs; developmentally appropriate curriculum in home, and early childhood settings; early intervention/educational policies.

ECAE 7102T Foundations of Early Childhood, Early Childhood Bilingual and Early Childhood Special Education
45 hours; 3 credits
Interdisciplinary analysis of the foundations of early childhood education, multicultural
and bilingual education, and special education; impact of political, economic, social,
cultural, and technological changes in the fields of early childhood education, including
bilingual and special education. We will examine changing views in curricular,
pedagogic, and policy implications for teaching linguistically and culturally diverse young
children with and without special needs, including children with autism; comparative
studies of early childhood education in a global context, with special emphasis on urban
settings, integrated co-teaching and collaboration with peers, families and communities.

ECAE 7103T Introduction to Research in Early Childhood Education
45 hours plus conference; 3 credits
Principles and methods and problems in the development of formal and informal research in early childhood education with emphasis on research in classroom settings. Development of observation and recording methodologies emphasizing the role of teacher as researcher. Scope and variety of educational research; principles and characteristics of qualitative and quantitative research; structure and organization of a research project. Review of research literature related to current themes and issues in education.

ECAE 7104T Environments for Infants, Toddlers and Young Children with Special Developmental and Learning Needs
3 hours recitation, 1 hour supervised field experience; 3 credits
An examination of developmental disabilities in young children, their identification and developmentally appropriate and effective remediation. Implications for adapting the environment, individualizing programs and instruction in diverse early childhood settings, co-teaching and cooperative models and methods. Development of positive behavioral supports for all young children, including English language learners. Role of families and educators in creating learning environments at home and in educational settings.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

ECAE 7105T Imagination, the Arts, and Multidisciplinary Learning
45 hours; 3 credits
Multidisciplinary curriculum through the creative arts. The creative process; experiential approach to the study of works of art in music, dance, theater, and the visual arts. Integrating the arts with other curriculum areas for all children, including English language learners and children with special needs. A global perspective that draws upon diverse cultures. Based on the collaborative work between the Lincoln Center Institute for the Arts in Education and the School of Education. Lincoln Center Institute for the Arts in Education practice and other approaches to aesthetic education and learning. Guest teachers/artists.

Prerequisite: Early Childhood and Art Education 7101T or 7102T.

ECAE 7106T Visual Arts in Early Childhood Education
30 hours plus conference; 3 credits
Pedagogical approaches to integrating the visual arts in early childhood curriculum. Analysis and application of theory and research to the teaching of the visual arts for all young children, birth through grade two, including culturally and linguistically diverse children, as well as children with special needs. Philosophies and goals of visual arts education, particularly as they apply to diverse, urban communities. Artistic development in early childhood within varied social, cultural, and environmental contexts. Role of materials and experience as they apply to artistic learning in young children. Work with a variety of artistic forms and media, field trips.

Prerequisite: Early Childhood and Art Education 7100T or 7102T.

ECAE 7107T Play in Cross-cultural Contexts
30 hours plus conference; 3 credits
Theories and research findings on young children's play in culturally and linguistically diverse early childhood, family, and community settings. Implications of play for the intellectual, social, emotional, and physical development of all children, including children with special needs, from infancy through the early childhood years. Play in the early childhood curriculum; role of the teacher in facilitating children's play.

ECAE 7108T Mathematics in Early Childhood
30 hours, 30 hours supervised field experience; 3 credits
Study of early childhood curriculum and instruction in mathematics for

all young children, including English language learners and children with special needs. Topics include mathematical content; development of cognitive processes; selection and use of instructional resources; interdisciplinary and thematic teaching; family involvement; assessment options and the appropriate use of technological tools. Students who possess a New York State Initial Certificate in Early Childhood Education or its equivalent may complete the field experience in their own early childhood classrooms; students who do not possess a New York State Initial Certificate in Early Childhood Education or its equivalent will complete the field experience under the direct supervision of a certified teacher.

Early Childhood and Art Education 7101T or 7102T.

ECAE 7109T Scientific Inquiry in Early Childhood Education
30 hours, 30 hours supervised field experience; 3 credits
Approaches to nurturing curiosity in children, from infancy through the early childhood years. Development of educational environments to promote scientific curiosity and playful exploration in young children, including English language learners and children with special needs. Integration of science in the early childhood curriculum; exploration of natural environments; creative representation of science learning. Family involvement in science education; familiarity with technologies and community resources. Students who possess a New York State Initial Certificate in Early Childhood Education or its equivalent may complete the field experience in their own early childhood classrooms; students who do not possess a New York State Initial Certificate or its equivalent will complete the field experience under the direct supervision of a certified teacher.

Prerequisite: Early Childhood and Art Education 7101T or 7102T.

ECAE 7110T Independent Project and Research Seminar
45 hours plus conference; 3 credits
A study of research methods, data analysis and the dissemination of results. Development and completion of an independent project related to an area of early childhood education. The submission of a bound copy of the study is required.

Prerequisite: Early Childhood and Art Education 7103T.

ECAE 7111T Language Learning and Development in Young Children
45 hours; 3 credits
The structure, acquisition, and development of language and oral and written communication in young children, including English language learners and children with special needs. Language and communication development within the context of children's development; role of family, community and culture. Study of linguistic structures, including phonological, syntactic and semantic development. Creating language- and text-rich environments for young children.

Prerequisite: Early Childhood and Art Education 7101T or 7102T.

ECAE 7113T Curriculum Modifications for Infants, Toddlers, and Young Children with Special Needs
45 hours; 3 credits
Special programs, modification of curriculum across cognitive, social-emotional, language, and physical domains as well as across content areas. Teaching strategies and approaches designed to meet the individual and group needs of children and create an inclusive classroom community. Differentiated instruction for culturally and linguistically diverse young children with special needs including giftedness, and delays and disabilities across the developmental spectrum in early education settings. Focus on family, community, and interagency partnerships; appropriate use of technology, including assistive technology; multiple assessment strategies. Field experiences in a variety of schools and community settings.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

ECAE 7114T Administration and Supervision of Early Childhood Education Programs
45 hours; 3 credits
Approaches to administration and supervision of early childhood settings for children birth through grade two, including children with special needs and children who are English language learners. Culturally and developmentally appropriate practice in programs for young children; curriculum development; program development and evaluation. Public policies and regulations; organizational theory; development and supervision of personnel; management of facilities; finances. Informal and formal assessment of children; communication with and involvement of families and caregivers; community relations; interagency collaboration.

ECAE 7115T Literacy Curriculum in Early Childhood
30 hours plus conference, 30 hours supervised field experience; 3 credits
Theoretical and methodological approaches to fostering literacy in young children, including English language learners and children with special needs. Study of relationships between speaking, reading, and writing. Research on teaching literacy. Development of literacy through literature and the arts. Role of family, community, and culture in young children's literacy learning. Formal and informal assessment. Students who possess a New York State Initial Certificate in Early Childhood Education or its equivalent may complete the field experience in their own early childhood classrooms; students who do not possess a New York State Initial Certificate in Early Childhood Education or its equivalent will complete the field experience under the direct supervision of a certified teacher.

Prerequisite: Early Childhood and Art Education 7111T.

ECAE 7116T Culturally and Linguistically Diverse Families, and Communities, and the Teaching of Social Studies in Early Childhood Education
30 hours; 30 hours supervised field experience; 3 credits
A study of teaching young children about the social world, including culture, language, and the role of the community. The use of social studies as a framework for an integrated curriculum including math, science and English Language Arts in single language, bi-lingual and dual language programs. Approaches to integrating parents and families into culturally and linguistically diverse early childhood educational environments. Study of social, educational, political and historical frameworks that affect early childhood education.

Prerequisite: Early Childhood and Art Education 7101T or 7102T.

ECAE 7119T Workshop in Early Childhood Education
45 hours; 3 credits
Study of solution of problems concerning the organization of subject matter. Techniques of instruction, classroom management, pupil adjustment, school-community relationships. Attention is given to the particular needs and interests of students, with provision for individual and group study.

Corequisite: Early Childhood and Art Education 7121T or employment as a teacher in a public or approved private school.

ECAE 7120T Seminar and Comprehensive Student Teaching: Early Childhood Education
4 hours recitation, weekly supervised teaching (at least 300 hours); 6

credits
Student teaching in one or more of the following age levels: infants and toddlers, preschool, kindergarten, grades 1 and 2 as required to qualify for initial certification in early childhood education. Design of developmentally appropriate environments, curricula and pedagogy for young children birth-grade 2. Emphasis on learning needs of children in culturally and linguistically diverse urban settings. Reflection on practice. Development of professional portfolio and preparation for the Teacher Performance Assessment (EdTPA). Open only to students who have completed all program courses with a grade point average of 3.00 or higher. A student who received a grade lower than a B in student-teaching must apply to the ECAE chairperson for permission to reregister for student teaching.

Prerequisite: Early Childhood and Art Education 7101T; 7102T; 7100T; 7104T; 7111T or 7115T; 7116T; 7108T; 7105T or 7106T or 7107T; 7109T and a cumulative graduate education index of 3.0 or higher.

ECAE 7121T Seminar and Student Teaching Practicum I in Early Childhood Education
15 hours seminar; at least 150 hours student teaching/semester; 3 credits
Advanced course in student teaching. Opportunity for extensive participation in teaching and school activities. Hours to be arranged. Students who hold an Initial Certificate in Childhood Education or in Special Subjects must complete at least 150 hours of student teaching in Education 7121T in order to qualify for the Professional Certificate in Early Childhood Education. Students who do not hold an Initial Certificate in Early Childhood Education or Childhood Education or in Special Subjects must complete at least 150 hours of student teaching in Education 7121T and an additional 150 hours of student teaching in Education 7122T in two of the following age groups: preschool, kindergarten, or grades one and two. All students must have experience with all three age groups through the combined field experience and student teaching practica.

Prerequisite: Early Childhood and Art Education 7101T; 7102T; 7100T; 7104T; 7111T or 7115T; 7116Tor 7108T or 7105T or 7106T or 7109T; 7107T and a cumulative graduate education index of 3.0 or higher.

ECAE 7122T Seminar and Student Teaching Practicum II in Early Childhood Education
15 hours seminar; at least 150 hours student teaching/semester; 3 credits
Pedagogy and curriculum development in early childhood settings, birth through grade 2. Integrated curriculum in early childhood settings, with a focus on culturally and linguistically diverse urban settings. Teachers as researchers; development of a reflective approach to teaching and assessing a diverse child population, including children with special needs and English language learners. Families and communities in early childhood education; interagency collaboration. Students who have completed 150 hours of student teaching in Education 7121T [764.1T] in preschool, kindergarten, or grades one and two, must complete the student teaching requirements for this course in a second age level.

Prerequisite: Early Childhood and Art Education 7121T and a cumulative graduate education academic index of 3.0 or higher.

ECAE 7359T Assessment and Intervention of Early Childhood Bilingual and Second Language Learners
30 hours plus conference; 25 hours supervised field experience; 3 credits
Assessment and interventions of English language learners, including those with special needs. Emphasis on qualitative and quantitative procedures. Examination of formal language instruments for young children and the study of proficiency levels, development of formal and informal assessment techniques, the linking of assessment to developmentally appropriate instruction. Consideration of linguistic, cultural, and socioeconomic background in modifying and adapting testing and instructional procedures. The relationship between bilingual and second language instructional approaches and the Pre-Kindergarten Foundations of the Common Core State Standards and the Common Core State Standards.

ECAE 7360T Introduction to Early Childhood Bilingual and Second Language Acquisition
45 hours; 25 hours supervised field experience; 3 credits
This course examines characteristics and theories of bilingual and second language acquisition as well as the development of educational models and methods of bilingual, dual language and second language within a multicultural and global context. It provides a review of research associated with the socio- and psycho-linguistic, cognitive and socio-cultural dimensions including the cultural, linguistic, and social contexts of young children learning more than one language. It guides students' exploration of developmentally appropriate practices in the context of changing views, methods of teaching, and public policy with linguistically and culturally diverse young children with and without special needs. Discussions also focus on quality inclusive early childhood dual language and bilingual programs and methods of family involvement.

ECAE 7361T Methods and Research in Teaching English Language Arts to Young Bilingual and Dual Language Learners including Young Children with Special Needs
45 hours, 25 hours supervised field experience; 3 credits
The development and implementation of integrated developmentally appropriate programs for dual language learners. Research based methods of teaching English language arts and the home language arts to English language learners including teaching those with special needs. Strategies for teaching language throughout all content areas and throughout all centers within the classroom, including family-involvement and team oriented approaches.

ECAE 7381T Seminar and Applied Research in Early Literacy
45 hours plus conference; 3 credits
Advanced concepts of educational research, including design of research proposals and data collection. Application of techniques of research using mixed methods to study language acquisition and early literacy. Consultation and application in appropriate early childhood field settings. Design and implementation of an original research project.

ECAE 7382T Seminar in Designing and Evaluating Programs and Applied Research in Early Childhood Education
45 hours plus conference; 3 credits
Reviews early childhood intervention programs and strategies aimed to serve low-income children (birth to second grade) and their families; addresses developmental and health risks associated with growing up in the context of poverty; develops an evaluation proposal.

ECAE 7383T Methods and Practicum in Literacy for Struggling Readers and Writers: Pre-Kindergarten to Grade 2
30 hours, 30 hours supervised field; 3 credits
Development, application, and implementation of literacy (reading and writing) strategies with young children of diverse abilities, particularly struggling readers and writers. Development of curriculum instruction and adaptation of materials and strategies based on the theories and

research findings discussed in the area of literacy from birth to grade 2. Presentation of supervised cases study in formal setting.

ECAE 7386T Literacy Education: Diagnosis in Communication and Reading Difficulties
45 hours lecture; 3 credits
Analysis of recent research findings and factors related to children's delay in language acquisition, development and use of verbal and nonverbal communication skills, and reading difficulties from birth to grade 3. The influence of group membership and cultural pluralism on the development of these skills with special attention to the bi-dialectal child and the English language learner. Analysis of the implications for literacy education, with emphasis on diagnosing language and reading delays.

ECAE 7387T Instructional Strategies and Assessment of Young Children's Literacy Skills
45 hours; 3 credits
Approaches to teaching and assessing young children's literacy abilities through the use of records, interviews, observations, portfolios, and formal and informal assessments to inform instruction. Procedures for the selection, administration, and evaluation of test materials and meeting NYS English Language Arts performance standards. Study of illustrative case studies including English language learners and young children with special needs.

ECAE 7506X Projects in Creative Art for the Classroom

45 hours lecture plus conference; 20 hours field experience; 3 credits
Initiation and development of projects in creative art in consultation with the instructor. Presentation of an evolving portfolio to both art and education faculty for evaluation. Must satisfy standards of originality and execution consistent with achievement of the advanced degree, and demonstrate and document how personal artistic knowledge translates into classroom practice. (This course is the same as Art 7250T [781T])

Prerequisite: Matriculation for the M.A. in teaching art.

ECAE 7507T Critical Issues in Education--Social Values and Individual Needs: Art
45 lecture hours, plus conference; 3 credits
Systematic study of the teacher's role, focusing on interactions of people and environments in an educational setting. Topics in educational foundations provide concepts for examining teacher and student diversity and teacher role. Exploratory research techniques.

ECAE 7520T Seminar II in Pedagogy and Curriculum

45 hours, 3 credits
Advanced theories and methods of teaching art at grade levels appropriate for New York State certification requirements; focus on developing reflective practitioners and research based instruction; analysis of New York State Learning Standards in art; teaching art to all students, including students with special needs and English language learners; integrating technology into the classroom; developing, implementing, and evaluating the art curriculum in urban classrooms. Students enroll in workshops in identifying, reporting, and responding to child abuse and in substance abuse, fire and arson prevention and safety education.

Prerequisite: ECAE 7506X, 7533T, 7530T, 7538T and 7542T.

Corequisite: ECAE 7543T.

ECAE 7526T Seminar in Educational Research: Art

45 hours seminar, plus conference; 3 credits
Advanced concepts of educational research compared and contrasted with modes of inquiry in the disciplines; emphasis on qualitative and quantitative research methods and possible uses of research. Analysis of research relevant to teaching art. Formulation, development, and realization of an original research project relevant to teaching and learning art.

Prerequisite: ECAE 7506X, 7533T, and 7507T.

ECAE 7530T Diverse Classrooms in a Visual Culture

45 hours plus 20 hours of field experience; 3 credits
Critical examination of the needs of contemporary students in a society dominated by visual images. Pedagogical strategies for analyzing visual messages in terms of diversity, plurality, and the impact of visual culture on curriculum and teaching. Discussion of the impact of images and artifacts from a variety of visual traditions on classroom interactions, personal identity formation, and learning.

Prerequisite: matriculation in the M.A. degree program, Art Teacher.

ECAE 7533T Advanced Seminar in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Art
45 hours seminar, plus conference; 20 hours field experience; 3 credits
Expansion of the student's knowledge and skills in art to develop individual approaches to effective teaching in different classroom situations. Improving teaching methods through review of relevant research, reflection on self-as-teacher, analysis of classroom interactions, discourse, and effective teaching and learning environments. Introduction to methods of educational research. Analysis of modes of communication in the classroom. Examination of the specialized discourses of the discipline and implications for teaching.

Prerequisite: ECAE 7506T.

ECAE 7538T Seminar I in Pedagogy and Curriculum

45 hours seminar, 3 credits
Seminar concerning problems and issues in the organization of subject matter. Introduction to methods of instruction, curriculum development and assessment, classroom management, and developing school-community relationships. Focus on self-reflective teaching styles and assessment procedures to address the learning needs of a diverse student population, students with special needs, and English language learners. Preparation in literacy and language acquisition. Attention given to particular needs and interests of students and methods of integrating technology into the classroom. Role of materials and resources applied to teaching art at grade levels appropriate for state certification requirements.

Prerequisite: ECAE 7506T and 7533T.

Corequisite: ECAE 7542T.

ECAE 7542T Art Education: Student Teaching Practicum I

150 hours or twenty days of weekly supervised student teaching; 30 hours field observation; 2 credits
Course in student practice teaching. Opportunity for extensive and intensive participation in teaching and school activities. Hours to be arranged. Observing, developing, and studying curriculum in light of teaching experiences and observations.

Prerequisite: ECAE 7506X, 7533T, and 7507T.
Corequisite: ECAE 7538T.

ECAE 7543T Art Education: Student Teaching Practicum II

150 hours or 20 days of weekly supervised teaching, 30 hours of field experience; 2 credits
Advanced course in student practice teaching. Opportunity for more extensive and intensive participation in teaching and school activities. Hours to be arranged. Daily supervised student teaching in grades and subject areas appropriate for New York State certification requirements. Observing, developing, and studying curriculum in light of teaching experiences and observations.

Prerequisite: ECAE 7506X, 7533T, 7538T, and 7542T.

Corequisite: ECAE 7520T.

ECAE 7551T Critical Issues in Education: Teacher-Child Interactions

30 hours lecture, 30 hours laboratory; 3 credits
Systematic study of the teacher's role, focusing on teacher-child interactions in early childhood educational settings. Topics in educational foundations provide concepts for examining teacher and student diversity and teacher role. Exploratory research techniques.

ECAE 7652T Teaching Young Children, including Children with Special Needs and English Language Learners through the Arts

30 hours lecture, 30 hours laboratory; 3 credits
Development of competencies needed to teach young children, including children with special needs and English language learners with an emphasis on integrating the visual and performing arts; formal and informal assessment, goal setting, and integration of theories of learning, the expressive arts, improvisation and research validated practice into curriculum across a variety of content areas. We will examine philosophies and methods for integrating the storytelling, theater improvisation, puppetry, creative drama and the visual arts within early childhood settings, with emphasis on their use to support children with special needs and English language learners. Field experience in inclusive early childhood settings. Focus on reflective practice and on the development of nurturing and stimulating learning environments inclusive of children with special needs.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

ECAE 7663T Communication Development and Assessment of Young Multilingual Children with and without Special Needs

30 hours lecture plus conference; 3 credits
Study of language acquisition, focusing on the development and assessment of multi-lingual infants and young children. Examination of theories, research, models and methods regarding multi- language learning. including nonverbal behavior and communication. Language disorders in young children and language acquisition problems. Assistive technology and augmentative communication devices for enhancing communication with young children. Focus on family-centered practice, evidence-based practice, and collaborations with other professionals, diverse families, early intervention programs, and community organizations. Field experiences in a variety of settings including hospitals, home- and center-based early intervention programs, early childhood centers, and inclusive early childhood special education classrooms.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

ECAE 7667T Education of Diverse Gifted Young Children

45 hours; 3 credits
Educational approaches for working with diverse gifted and talented young children; models and strategies for differentiating instruction. Focus on contemporary theories and research. Field experiences in schools and/or community settings.

ECAE 7668T Young Children with Special Needs: Gifted Education

30 hours plus conference; 3 credits
Investigation of the developmental nature, causes, and characteristics of diverse gifted and talented young children. Implications for classroom teachers and other professionals in areas of interpersonal interactions, collaboration, and instruction. Focus on historical, social, and legal foundations of gifted education. Theories of learning and development. Influence of gender, class, language, race/ethnicity, disabilities, and sexuality on the construction of giftedness, as interpreted within and across cultures. 10 hours of field experience in a variety of schools and classroom settings.

ECAE 7669T Assessment of Diverse Gifted and Talented Young Children

30 hours plus conference; 3 credits
Critical review of formal and informal assessments of the cognitive, social, and affective characteristics of diverse gifted and talented young children, including gifted and talented young children with special needs. Cultural, linguistic, and societal factors involved in identification, placement, and the academic performance of diverse gifted and talented young children. Implications for classroom settings, teaching, and collaboration with parents and other professionals. 10 hours of field experience in a variety of school and classroom settings.

ECAE 7670T Curriculum Design for Diverse Gifted and Talented Young Children

30 hours plus conference; 3 credits
Principles, rationale, and research-validated methods for differentiating curriculum and instruction for diverse gifted and talented young children, including gifted and talented children with disabilities. Inquiry processes across all content areas. Use of technology for differentiation of instruction. Approaches to the design, management, and evaluation of learning environments across a variety of settings. Collaboration with other professionals. Focus on the New York State Learning Standards and educational experiences of students from diverse cultural and linguistic backgrounds. 20 hours field experience in a variety of schools and classroom settings.

ECAE 7675T Supporting Diverse Families and Parent-Child Relationships

30 hours plus conference; 3 credits
Study of families developing relationships with their infants and young children with and without special needs beginning at their transition to parenting. Focus on helping parents/parent-figures understand their infant/young child's behavior and temperament; engagement in responsive and sensitive behaviors, and developmental guidance; assessment of the parent/parent-figure relationship with child; infant mental health; co-parenting relationship, and parents' own family history. Emphasis on urban, linguistic, and cultural perspectives, resource access, and development of parent-community partnerships. Students will develop skills to support positive parenting and to work collaboratively with parents and professionals including mental health providers. Field experiences in hospitals, home- and center- based early intervention programs, early childhood centers, inclusive early childhood special education classrooms settings and a variety of community settings.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or

permission of the program head.

ECAE 7678T Developmental and Educational Assessment of Infants and Young Children with Special Needs
45 hours seminar plus conference; 3 credits
Formal and informal developmental and educational assessment tools for children birth through second grade with special needs and English language learners will be reviewed, including screening tools, standardized tests, and curriculum-based assessments. Attention will be given to understanding cultural, linguistic and societal factors in identification of young children with special needs and adapting assessment procedures; uses and limitations of assessment tools; collaboration with related service professionals and parents; initial training in one screening and one assessment tool, which includes administration, interpretation, and recommendations for developmental and educational goals. Field experiences in a variety of settings including hospitals, home and center based early intervention programs, early childhood centers and inclusive early childhood special education classrooms.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

ECAE 7682T Seminar in Teaching Young Children Experiencing Emotional and Behavioral Problems
30 hours plus conference; 3 credits
Analysis of theory and research-validated practices related to the teaching of young children experiencing emotional, social and/or behavior problems. Discussion of daily classroom and instructional management and implementation and effectiveness of instructional strategies. Exploration of teacher/student interactions and teacher reflective practice.

ECAE 7683T Typical and Atypical Physical Development in Infants, Toddlers and Young Children: Prevention and Early Intervention
30 hours plus conference; 3 credits
In-depth knowledge of typical and atypical physical development in infancy, and toddlerhood, and early childhood, including sensory, motor, and neurological developmental processes and overall health and chronic health conditions; early identification and effective interventions; and appropriate positioning techniques and curriculum in home, child care, preschool, and early intervention settings. Implications and development of enriched and nurturing home and classroom environments for infants, toddlers and young children with atypical development. Focus on family-centered practice, evidence-based practice, and multidisciplinary professional collaborations across cultural, linguistic, and ethnic contexts. Field experiences in a variety of settings including hospitals, home- and center-based early intervention programs, early childhood centers, and inclusive early childhood special education classrooms.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

ECAE 7692T Seminar in Early Childhood Special Education
45 hours; 3 credits
Seminar concerning problems and issues with curriculum-based assessments, differentiated instruction, response-to-intervention, classroom management, school-community and family relations in inclusive and early childhood special education settings. Attention is given to the particular needs and interests of young children, with provision for individual and group study.

ECAE 7695T Student-teaching in an Inclusive Teaching Practicum
10 hours seminar and 100 hours of supervised student teaching; 1 credit
Supervised student teaching in an inclusive early childhood setting.

ECAE 7820T Supervised Laboratory and Applied Field Experience in Child Development
30 hours seminar, 60 hours laboratory and directed independent activity; 4 credits
Consideration of current issues and applied child development in a variety of community and center-based settings. Observation and discussion of child development.

ECAE 7885T Advanced Human Development I: Psychosocial Development in Early Childhood
30 hours lecture plus conference; 3 credits
Theories of social and emotional development from birth through kindergarten. Introduction to developmental, psychoanalytic, and social psychological theories. The role of relationships in development and effects of socialization experiences and culture. Observations of infants, toddlers, young children and parent-child interactions. Requires 60 hours of field experiences in a variety of settings including hospitals, home- and center-based early intervention programs, early childhood centers, and inclusive early childhood special education classrooms, which are done in consultation with the instructor.

ECAE 7886T Advanced Human Development II: Parent-Child Interactions
30 hours lecture plus conference; 3 credits
Theories of social and emotional development from birth through kindergarten. Moving from theory to practice: Relation of theories of development to the function and assessment of the parent-child relationship. Emphasis is placed on sensitive listening, providing emotional support, and developmental guidance to child and parents. Requires 120 hours of field experiences in a variety of settings including hospitals, home- and center-based early intervention programs, early childhood centers, and inclusive early childhood special education classrooms, which are done in consultation with the instructor.

ECAE 7908X Cognition and Information Processing
45 hours; 3 credits
Current topics in the fields of early cognition and information processing, including communication. Examination of these issues in relation to children's readiness, grouping, learning to learn, and concept learning as well as social information processing.

The following inactive course(s) will only be offered if there is sufficient demand:

ECAE 7024X Soviet Education

ECAE 7117T Theories and Practices in the Study of the Young Child's Progress

ECAE 7208T The Teaching of English to Language-Hanicapped Children in the Primary School

Earth and Environmental Sciences

Department office: 3131 Ingersoll Hall
Phone: 718.951.5416

Full-time Faculty

Professors: Chamberlain, Cranganu, Marra, Powell, Seidemann
Associate Professors: Aja, Cheng, Cherrier
Assistant Professors: Boger, Branco, Flores, Smith
Lecturer: Garb

The Department of Earth and Environmental Sciences provides both study and research in subjects related to the solid earth and its atmosphere and hydrosphere. For the graduate student, areas of study and exploration include coursework, seminars and labs in a variety of subjects including meteorology and earth science to the geology of U.S. national parks; the history and evolution of life on earth through the study of fossils; geophysics; mineralogy; changes in the global environment; and many other topics. Our research labs support studies in petrophysics, analytical and experimental geochemistry, environmental geochemistry, hydrology, coastal studies, oceanography, paleontology, petrology and GIS-supported geology. Specific resources include reaction cell ICP-MS, XRD, high-resolution TEM, wet labs and research petrographic microscopes. Off-campus electron microprobe and variable pressure SEM facilities are available for graduate student research. Collections of minerals, rocks, fossils, meteorites, and other earth materials, held by local institutions with which the Department of Earth and Environmental Sciences is affiliated are available for student research.

M.A. degree program in earth and environmental sciences
HEGIS code 1914; SED program code 02091

The M.A. program in earth and environmental sciences offers advanced instruction and research experience in a wide array of subjects in earth and environmental sciences. Depending on the interests of the student, the degree program can include lectures, laboratory work, field work, seminars, and teaching. The M.A. degree prepares students for employment in university-based laboratories, in environmental and geological consulting companies, in such governmental regulatory agencies as the EPA, NYDOE, and NPS, in state and federal survey departments, and in urban planning agencies. It also provides masters-level research training for earth science teachers.

Matriculation requirements

Applicants must offer an undergraduate major in geology, environmental science, or a related field, completed with a grade point average of 3.00 (B) or higher. General matriculation and admission requirements of the Division of Graduate Studies are in the Bulletin section "Admission."

Degree requirements

Thirty credits in courses in Earth and Environmental Sciences are required for the M.A. degree, including the required courses EESC 7155, 7521, and 7771. Pertinent courses in other science departments may be included in the 30 credits with permission of the Graduate Deputy.

Students must maintain a professional portfolio, and submit the complete document for approval by the Earth and Environmental Sciences Department prior to graduation.

Courses in the Earth and Environmental Sciences Department offered toward the degree must be numbered 7100 or above.

The program of study must be approved by the deputy chairperson.

M.S. degree program in earth and environmental sciences
HEGIS code 1914; SED program code 36028

The M.S. degree in Earth and Environmental Sciences is a thesis-based degree emphasizing research and independent work. Thesis research may be conducted in such areas as classical geology, including petrology, sedimentology, geochemistry, and paleontology; geotechnology, including GIS and remote sensing; and environmental science, including groundwater hydrology, environmental chemistry, and aquatic pollution.

Our M.S. degree prepares students to pursue a doctoral degree at the Graduate Center of the City University of New York or at another university of their choice, and to teach and conduct research at the college and university level, or in industrial, governmental and survey agencies.

Matriculation requirements

Applicants must offer an undergraduate major in geology, environmental science or a related field, completed with a grade point average of 3.00 (B) or higher, and have completed EESC 7150 with a grade of B+ or higher.

General matriculation and admission requirements of the Division of Graduate Studies are in the Bulletin section "Admission."

Degree requirements

Thirty credits in courses in Earth and Environmental Sciences are required for the M.S. degree, including the following required courses: EESC 7151, 7155, 7521, and 7771. Pertinent courses in other science departments may be included in the 30 credits with permission of the Graduate Deputy.

Students must register for 1 to 3 credits of Thesis Research (EESC 7951, 7952, or 7953). Prior to enrolling in a Thesis Research Course, the student must assemble a Thesis Committee consisting of the thesis advisor and one other faculty member. Students must maintain a professional portfolio and submit the complete document for approval by the Earth and Environmental Science Department prior to graduation. In addition, students must defend a thesis acceptable to a thesis defense committee appointed by the Graduate Deputy.

Information about requirements for the thesis is in the Bulletin section "Academic Regulations and Procedures."

Courses in the Earth and Environmental Sciences Department offered toward the M.S. degree must be numbered 7100 or above.

The program of study must be approved by the deputy chairperson.

M.A.T. degree program: earth science teacher (grades 7-12) HEGIS code 1917.01; SED program code 33640 (Concentration A); 33641 (Concentration B)

Matriculation requirements

Each candidate will be evaluated individually. Based upon this evaluation and certification requirements of the New York State Education Department, courses in education or another department may be substituted for required courses with permission of the Program Head of middle school science education. Applicants to Concentration A must have completed a minimum of six credits in earth and environmental science or in cognate sciences including chemistry and physics. Applicants to Concentration B must have completed a minimum of 9 credits in earth science and six credits in cognate sciences including chemistry and physics. Students deficient in science credits may be accepted on condition that they complete additional coursework as recommended by the Program Head of middle school science education.

This program leads to a Master of Arts in Teaching Earth Science, and a New York State Professional Teaching Certificate in Adolescent Science Education with a specialization in earth science in grades 7-12.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 500 650 on the paper based test or 280 on the computer based test or 61 114 on the internet based test to be considered for matriculation.

General matriculation and admission requirements of the Division of Graduate Studies are in the "Admission" section.

Degree requirements

Thirty to thirty-three credits are required for the degree depending on the applicants' previous coursework, teaching experience and the certificates the applicant holds.

Concentration (A): 30 credits (for in-service teachers)
This program leads to a New York State Professional Teaching Certificate in Adolescent Earth Science and General Science Education for in-service science teachers. Applicants must hold a New York State Initial Certification in classroom teaching and a minimum of six credits in earth and environmental science or in cognate sciences including chemistry and physics.
The following required courses: Earth Science and Environmental Science 7013T, 7040T, 7044T, and either 7006T or 7042T. Twelve additional credits in Earth Science and Environmental Science numbered 7000T or higher, or 7100 or higher with permission of the chairperson. Secondary Education 7340T and one of the following courses Secondary Education 7311T, 7305T, 7326T or 7320T.

Concentration (B): 30-36 credits (for pre-service teachers)
This option leads to both New York State Initial and Professional Teaching Certificates for pre-service science teachers. Applicants must have completed a minimum of 9 credits in Earth science and six credits in cognate sciences including chemistry and physics. Fifteen credits in Earth and Environmental Sciences numbered 7000T or higher, or 7100 or higher with permission of the chairperson. All of the following courses in education: Secondary Education 7500X, 7503X, 7312T or 7311T, 7320T, 7671T, and 7340T.

Other requirements that must be met include 100 hours of field experience, 40 days or 300 hours of student teaching at appropriate grade levels (Secondary Education 7332T and 7542T) or one year of full-time teaching at the appropriate subject area at appropriate grade level, completed study at the college level of a foreign language, and any additional New York State requirements.

Assistantships

Some assistantships in teaching and research are available to qualified students. Inquiry should be made of the chairperson.

CUNY Ph.D.

The City University of New York offers a doctoral program in earth and environmental sciences, in which the Earth and Environmental Sciences Department participates. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Earth and Environmental Sciences Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Earth and Environmental Sciences Department and the executive officer of the doctoral program.

Honor Society

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

Courses

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

EESC 7000T Meteorology

5 hours; 3 credits
An introduction to weather and its causes: Earth's atmosphere and energy budget; humidity and precipitation; clouds; air pressure, and wind; storms and hurricanes; weather forecasting. Climate change predictions considered from geological and historical perspective. (Not open to students who have completed Geology 33 or 3900 [33.2] or the equivalent.)

Prerequisite: Geology or Earth and Environmental Sciences 7007T [607T].

EESC 7006T Geology of the National Parks

45 hours; 3 credits
Geologic landscape features of the national parks of the United States; geologic history and geological processes of landscape formation; role of parklands in modern society; national parks as recreation reserves, habitat preserves, and national geological laboratories. Areas covered in the course include parks such as Grand Canyon, Yellowstone, Yosemite, Glacier, Virgin Islands, Badlands, Shenandoah, Everglades, Acadia, and Voyageurs.

EESC 7007T Earth Science I

30 hours lecture, 30 hours laboratory and discussion; 3 credits
Stars and the solar system, description and motions of the earth in space, earth-moon system. Structure of the atmosphere. Weather elements and observations. Properties of the oceans. Internal structure of the earth: earthquakes, igneous activity. Laboratory work includes trip to the Rose Center for Earth and Space. (Not open to students who have completed a course in the physical world or principles of physical geography or historical geology or earth science.)

Prerequisite: two terms of general physics and two terms of general chemistry.

EESC 7008T Earth Science II

30 hours lecture, 30 hours laboratory and discussion; 3 credits
Agents and processes of gradation: weathering, mass-wasting, groundwater and stream erosion, glaciation, action of wind and waves. Rock types. Movement of the earth's crust. Principles of historical geology. Geologic time, evolution, paleontology. Laboratory work includes a field trip and a museum trip.

Prerequisite: Geology or Earth and Environmental Sciences 7007T [607T] or permission of the chairperson.

EESC 7011T The History of Life

45 hours; 3 credits
The history of life on earth as evidenced by fossils; origin and evolution of early life forms; the oxygen revolution; rise of animals and diversification of life; origin of vertebrates; conquest of land; dinosaurs and the reptile zenith; birds; origin and diversification of mammals; primates and human ancestry; mass extinction and the future.

EESC 7012T Earth Sciences: Planetology -- The Earth Perspective

30 hours lecture, 30 hours laboratory; 3 credits
Solar system; planetary bodies, their sizes, compositions, and interiors; meteorites, Sun-Earth-Moon relations; planetary environments; surface processes; heat balances and climates; earth's climactic and environmental conditions.

EESC 7013T Earth Science and the New York City Urban Environment

45 hours lecture, 4 field trips; 3 credits
Investigation of five guiding questions regarding the connections between geology and New York City: On what is the city built? Of what is the city built? How has the New York City environment changed? Why did the metropolis develop here? What environmental hazards does New York City face? Mandatory weekend field trips within Manhattan and Brooklyn.

EESC 7040T Geology through Global Arts and Artifacts

22 ½ hours lecture, 45 hours lab; 3 credits
Inquiry approach to formation and properties of minerals, rocks, and metals. Investigation of real-world applications of earth materials including those at the Metropolitan Museum of Art and other

institutions in the New York City area. Laboratory work will include a minimum of 3 weekend field trips to cultural institutions.

EESC 7041T New York City Water Sources and Cycles

22 ½ hours lecture, 45 hours lab; 3 credits
Principles of hydrology and hydrogeology with emphasis on the New York City region; history of NYC water supply; water quality; water treatment; water budgets and cycles; precipitation and storms; several weekend field trips required, including Prospect Park and Jamaica Bay.

EESC 7042T Geology of New York State

22 ½ hours lecture, 45 hours lab; 3 credits
Field-based approach to geological history of New York State; Grenville Orogeny, Lower Paleozoic strata and the Taconic Orogeny, Catskill delta and the Acadian Orogeny, Mesozoic rift basins; 6 days of field trips across New York State, including overnights.

Prerequisite: a minimum of 6 credits in Geology or Earth and Environmental Sciences.

EESC 7043T Oceanography

45 hours lecture; 3 credits
Physics, chemistry, and biology of the ocean, including marine geology. How the ocean regulates earth climate, the nature of life in the ocean as illustrated by diversity and ecosystem structure; how biological processes influence ocean chemistry; interaction of geological forces with ocean dynamics, human impacts on the ocean; ocean science for teachers; one or more field trips.

EESC 7044T Global Catastrophes

22½ hours lecture, 45 hours lab
Exploration of Earth dynamism and evolution; case histories of major events that changed the course of earth history such as atmospheric oxygenation, snowball Earth, Cambrian radiation, Cretaceous-Tertiary mass extinction, Central American land-bridge, and anthropogenic catastrophes; several weekend field trips required, including the American Museum of Natural History and beaches of Coney Island and/or Jamaica Bay.

Prerequisites: 9 credits in Geology or Earth and Environmental Sciences.

EESC 7090T Seminars in Geology

3 hours lecture; 3 credits
Series of seven selected topics in geology offered in public lectures in venues within New York City. Classroom-based discussion of each topic in the week following each lecture.

Prerequisite: Geology or Earth and Environmental Sciences 7007T [607T] and 7008T [608T].

EESC 7091T Research Experience for Teachers I: Immersion

5 seminar, 40 laboratory; one and a half credits
Participation in faculty-led research team; field and lab components; reflection on transferability to pre-college classroom.

Prerequisite: 12 credits in earth and environmental sciences and permission of the instructor.

EESC 7092T Research Experience for Teachers II: Research Proposal

45 seminar; one and a half credits
Seminar approach to development of research proposals; literature searches; literature reviews.

Prerequisite: EESC 7091 and permission of the instructor

EESC 7093T Research Experience for Teachers III: Independent Research

Minimum of 9 conference and independent work; 3 credits
Independent research within a faculty-supervised research team; public presentation of results required; reflection on transferability to pre-college classroom.

Prerequisite: EESC 7092 and permission of the instructor.

EESC 7150G Research Proposal

7.5 hours plus 2-hour lab, 1.5 credits
Development of independent research proposal; literature searches; literature reviews; development of hypotheses and methodologies.

Prerequisite: Permission of the chairperson

EESC 7151G Presenting Research in the Earth and Environmental Sciences

15 hours plus 1-hour lab, 1.5 credits
Principles and practices of presenting original scientific research at scientific meetings; concise technical writing; graphics (maps, graphs, photographs); Powerpoint presentation design; poster design.

Prerequisite: Earth and Environmental Sciences 7150, or permission of the chairperson.

EESC 7155X Professional Portfolios for Earth and Environmental Scientists

7.5 hours lecture, 30 hours seminar; 1.5 credits
Purpose of a professional portfolio; design and format; selecting material; reflection on education and career preparedness and planning

EESC 7214G Geophysics

45 hours lecture or seminar; 3 credits
Principles of seismology: elastic constants, types of 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.

EESC 7300G Paleontology of Invertebrates

30 hours lecture, 15 hours seminar, 30 hours laboratory; 4 credits
Advanced treatment of the functional morphology, systematics, evolutionary history, paleoecology of invertebrate animals through geologic time. Laboratory techniques in the use of fossils as primary data of organic evolution and as indicators of paleoenvironments. (This course is also open to qualified graduate students in biology.)

EESC 7400G Sedimentology

30 hours lecture, 45 hours laboratory; 3 credits
Dynamics of sedimentation, depositional environments, diagenesis and lithification. Fabrics, structures, classification of sedimentary rocks. Mechanical, chemical, microscopic, X-ray laboratory techniques in sedimentary analysis. Statistical methods. Special problems of clay and carbonate sedimentation.

EESC 7429G Stratigraphy

30 hours lecture, 30 hours laboratory; 3 credits

Principles of stratigraphy. Stratigraphic record and nomenclature. Faunal stratigraphy and correlation. Systematic stratigraphy of North America: Pre-Cambrian problems; geosynclinal, cratonal, nonmarine sedimentation of the Paleozoic era; Mesozoic and Cenozoic stratigraphy; paleontological aspects.

EESC 7470G Groundwater Hydrogeology

30 hours lecture, 60 hours laboratory; 4 credits
Physical, geochemical, and geologic aspects of groundwater hydrogeology; groundwater occurrence; resource management; groundwater contamination and environmental problems. Laboratory work includes field trips, computer models, and case studies.

EESC 7480G Contaminant Hydrogeology

37.5 hours, 15 laboratory; 3 credits
Principles of contaminant transport in groundwater; groundwater flow and mass transport modeling; site contaminant investigation and remediation; modern field techniques. Emphasis on case studies. Application of course content in term-long, site-based project. Two weekend field trips to sites in New York City area.

EESC 7500G Principles of Urban Water Dynamics

45 hours; 3 credits
Quantitative system analysis of urban estuaries, rivers and lakes; fundamental reaction and transport processes; mass and energy balances; eutrophication and water pollution; practical applications of Excel and Matlab.

Prerequisite: College Algebra or Calculus or permission of instructor.

EESC 7510G Water Infrastructure and Stormwater Management in New York City

30 hours lecture; 30 hours lab; 3 credits
Water supply and wastewater treatment in a mega urban system; water quality in New York City's Harbor; combined sewer overflow; grey and green infrastructure to achieve sustainability of water quality initiatives; types of green infrastructure and basic design principles; performance monitoring and assessment; green infrastructure co-benefits; engage and enlist stakeholders in stormwater management.

EESC 7521G Lab and Field Techniques Using Geospatial Technologies

30 hours lecture, 30 hours Laboratory; 3 credits
Basics of ArcGIS, including vector and raster data models and analyses, integration of datasets, projections and datums, data editing, and map layouts; collection of geospatial data in the field using handheld GPS units with data dictionaries, total stations, and base stations; importing field data into ArcGIS to edit, analyze and merge with other data sets.

Prerequisite: none

EESC 7522G Advanced GIS and Remote Sensing

30 lecture, 30 lab; 3 credits
Advanced techniques and modeling applications of ArcGIS taught such as spatial analyst, 3D analyst, and advanced techniques in modeling; image processing including image enhancement and classification of satellite data using Idrisi and ArcGIS softwares.

Prerequisite: EESC 7525 or department chairperson approval.

EESC 7525X Advanced Geological Field Mapping

15 hours lecture, 60 hours supervised field and laboratory work; 3 credits
Approximately 10 days of supervised field and laboratory work in deformed sedimentary or metamorphic sequences. Field preparation of geologic maps and sections; data collection with Brunton compas and GPS units; map construction with GIS. Builds upon prior experience with geological mapping and ArcGIS. Travel and material expenses.

Prerequisite: Permission of chairperson

EESC 7690G Geochemistry of Soils

45 hours; 3 credits
An examination of the physical chemistry of soils including soil mineralogy (formation, relative stability, ion exchange properties) and surface chemistry.

EESC 7695G Seminar in clay minerals and nanoparticles

45 hours seminar; 3 credits
Principles of mineral behavior; structure of layer silicates; types of layer silicates; clay minerals groups; nanomaterials and nanoparticle minerals; clays in soils and sedimentary environments; burial diagenesis of clays; clays as paleoclimate indicators; electrochemical properties of clays; thermodynamic stability of clays; environmental uses of clays; bentonites and other industrial
clays; clay formation and alterations during ore mineralizations

EESC 7730G Low Temperature Geochemistry

45 hours; 3 credits
Chemical equilibria in aqueous systems and at low temperature. Natural processes controlling the composition of streams, lakes, the ocean, and near-surface groundwaters; impact of biological systems and human activities. Water in the geological cycle, applications to weathering, sedimentary processes, diagenesis, and ore formation.

Prerequisite: Geology or Earth and Environmental Sciences 7700G [770G] or permission of the chairperson.

EESC 7735G Isotope Geology

45 hours lecture; 3 credits
Origin of the elements; age determination; implications of isotope ratio variations. Brief survey of some aspects of the chemistry of the atmosphere, hydrosphere, lithosphere.

EESC 7771G Geostatistics

30 hours lecture; 30 hours lab; 3 credits
Description and interpretation of geological and geophysical data through statistics. Major topics include statistical description of data; collection of data; probability; hypothesis testing; variance; correlation; spatial analysis multivariate analysis, graphical display of data, common distribution models, sampling and regression. The variogram as a tool for modeling spatial correlation, variogram estimation and modeling. Introduction to spatial mapping and prediction with kriging, integration of remote sensing and other ancillary information using co-kriging models, spatial uncertainty. Introduction to geostatistical software applied to large environmental, and reservoir engineering databases, emphasis on practical use of geostatistical tools. Applications of popular software, such as EXCEL® and SPSS®.

EESC 7780G Analytical Methods in Environmental Geochemistry

22.5 hours lecture, 45 hours laboratory; 3 credits
Survey of the whole spectrum of analytical methods that can be applied to Earth and Environmental materials, together with a critical

evaluation of their relative advantages and limitations. Basic principles of sampling, preservation, preparation, and method selection will also be discussed. Students gain extensive hands on experience with wet chemistry lab techniques, sample dissolution and digestion, colorimetric methods, quality control, as well as the use of modern sophisticated instruments such as ICP-MS, XRD, SEM-EDS, and TEM. In particular, EPA methods will be emphasized. This course is designed for students who wish to pursue a career in environmental or geological fields.

Prerequisite: Graduate standing, or with department chairperson approval.

EESC 7825X Ore Deposit Models

45 hours lecture; 3 credits
Examination of models for the formation of metallic ore deposits with relation to their environment of formation and primary mineralization processes. Prior familiarity with igneous petrology and geochemistry is required.

EESC 7830X Seminar in Advanced Ore Deposit Geology

45 hours seminar; 3 credits
Examination of the current issues and priorities in ore geology; emphasis on current methodologies, controversies in ore genesis, and current exploration priorities.

Prerequisites: EESC 7825

EESC 7835G Global Tectonics

45 hours lecture and two required field trips; 3 credits
Overview of plate tectonics settings; ocean ridges and transform faults, continental rifting margins, continental transforms, subductions zones, forearc and backarc basins and
orogenic belts. Earthquakes and Earth internal structure, plate tectonic and magmatism, and
measurements of plate motions. Prior courses knowledge of structural geology, petrology and
stratigraphy are recommended.

EESC 7840G Introduction to Petroleum Geology

30 hours lecture, 30 hours lab; 3 credits
Application of geological principles to structural geology (for trapping oil and gas), depositional environment (to create petroleum reservoirs), and source and reservoir rock properties (for the origin and migration of petroleum). The fundamental geological requirements of a wide variety of disciplines in the petroleum industry are satisfied without requiring a technical background. Students gain perspective about the value of geological reasoning and its relationship to their jobs/roles.

Prerequisite: none.

EESC 7841G Petrophysics

30 hours lecture, 30 hours lab, 3 credits
Theory and practice of measuring reservoir rock and fluid transport properties; lithology, porosity, absolute, relative and effective permeability, fluid saturations, capillary pressure, rock-fluid interactions, heterogeneity and geostatistics.

EESC 7902G Seminar

30 hours each term; 2 credits each term
Selected aspects of geology. Areas not directly covered in regular courses. Use of original sources. Students may take multiple sections of Earth and Environmental Sciences 7902G [790.2] and 7903G [790.3] with different topics up to a maximum of 6 credits.

Prerequisite: 10 credits in graduate courses in Geology or Earth and Environmental Sciences and permission of the chairperson.

EESC 7903G Seminar

45 hours each term; 3 credits each term
Selected aspects of geology. Areas not directly covered in regular courses. Use of original sources. Students may take multiple sections of Earth and Environmental Sciences 7902G [790.2] and 7903G [790.3] with different topics up to a maximum of 6 credits.

Prerequisite: 10 credits in graduate courses in Geology or Earth and Environmental Sciences and permission of the chairperson.

EESC 7951G Thesis Research

Hours to be arranged; 1 credit
Research for master's thesis supervised by a faculty member. No more than 3 credits in Earth and Environmental Sciences 7951G [795.1G] -7953G [795.3G] may be counted toward the degree. Credit is not earned until the thesis is accepted.

Prerequisite: permission of the chairperson.

EESC 7952G Thesis Research

Hours to be arranged; 2 credits
Research for master's thesis supervised by a faculty member. No more than 3 credits in Earth and Environmental Sciences 7951G [795.1G] -7953G [795.3G] may be counted toward the degree. Credit is not earned until the thesis is accepted.

Prerequisite: permission of the chairperson.

EESC 7953G Thesis Research

Hours to be arranged; 3 credits
Research for master's thesis supervised by a faculty member. No more than 3 credits in Earth and Environmental Sciences 7951G [795.1G] -7953G [795.3G] may be counted toward the degree. Credit is not earned until the thesis is accepted.

Prerequisite: permission of the chairperson.

The following inactive course(s) will only be offered if there is sufficient demand:

EESC 7226G Metamorphic Petrology

EESC 7320G Paleoecology

Economics

Department office: 217 Whitehead Hall
Phone: 718.951.5153

Full-time Faculty

Professors: Cherry, Klein, Peng, Uctum
Associate Professors: Arenberg, Fox, Goldberg, Thorne, Wang
Assistant Professors: Doytch, Slavtcheva

The department has a distinguished faculty whose members are committed to providing students with the intellectual tools, foundational knowledge, and skills they need to succeed in the workplace and to be lifelong learners.

M.S. degree program in business administration
HEGIS code 0517; SED program code 01895

Please note that Option 5 is contingent on NYSED approval and will not accept applications for admission prior to a Spring 2016 entry date.

A business administration degree can provide students with a variety of career paths ranging from public policy to international finance to banking. The Accounting, Business Management, Finance, and Economics Departments offer a 33-credit master of science degree in business administration with five options for specialization: economic analysis, global business, accounting, general business, business intelligence and data analysis.

Option one is more flexible and allows students to explore different areas of economics including health economics, public finance and public policy, and international trade.
Option two is more focused and is expressly for students with an interest in global business. It includes courses in global finance and management, international economics and finance, bargaining and conflict resolution, global business environment, and international human resource management.
Option three is for students with an interest in accounting. An undergraduate degree in accounting is not required. However, this option is only open to students who have taken Accounting 2001, 3001, 3011, 3021, and 3101(introductory accounting, managerial accounting, financial accounting, and income taxation) or the equivalent.
Option four is a more flexible major for those interested in general business. It is of interest to those who may have had previous undergraduate or graduate coursework in business and want to obtain a general business degree and also to those who never previously had such coursework and want to obtain a business degree. It can be customized by the student to the student's interest in a broad range of business topics.
Option five is for students interested in a career in applied statistical analysis or business analytics

All applicants must have undergraduate courses in macroeconomics, microeconomics, statistics, and calculus.

Degree requirements

A minimum of thirty-three credits is required for the degree. Students must complete at least 24 credits in the Business Management, Accounting, Finance, and Economics Departments.

The following courses are required: Economics 7000X, 7010X, 7020X, 7021X, 7025X. Option 1 students who have taken Mathematics 2101 or equivalent may, with permission of the graduate deputy, waive Economics 7025X, and substitute an appropriate course in Economics or another department. Option 1 students who have taken Mathematics 2501 or Mathematics 3501 or equivalent may, with permission of the graduate deputy, waive Economics 7020X, and substitute an appropriate course in Economics or another department. Students selecting Option 2 or Option 3 (below) may take either Economics 7000X or Business 7206X. They also take either Economics 7020X or Business 7276X; Economics 7021X or Business 7279X; Economics 7010X or Economics 7215X or [Business 7215X] or Finance 7215X; and either Economics 7025X or Business 7278X. Option 3 students who have taken an undergraduate course in calculus may, with the permission of the graduate deputy, waive Economics 7025X and substitute a course from the Option 3 requirements listed below. With permission of the graduate deputy chairperson, up to nine credits may be taken in appropriate courses in other departments. With permission of the graduate deputy chairperson, up to 12 credits may be accepted for work done at other institutions. Option 4 students with permission of the graduate deputy may substitute any or all courses from the graduate core of Economics 7000X or Business 7206X, Economics 7010X or Economics 7215X or Finance 7215X or [Business 7215X], Economics 7020X, Economics 7021X or Business 7279X, Economics 7025X or Business 7278X with any Business course. This will typically be allowed for those with previous undergraduate or graduate coursework in these course topics. Option five students take the courses described below.

Students select one of the following options to complete the remaining credits:

Option 1: Economic Analysis

A minimum of 18 credits (6 courses) from the following: Economics 7215X or Finance 7215X or [Business 7215X], Economics 7027X, Economics 7028X, Economics 7030X, Economics 7040X, Economics 7045X, Economics 7050X, Economics 7055X, Economics 7060X or Health and Nutrition Sciences 7144X, Economics 7090X and Economics 7095G. With the permission of the graduate deputy chairperson, students may

be allowed to take up to 6 credits of other courses to complete the 18 credit requirement in Option 1.

Option 2: Global Business

A minimum of 18 credits (6 courses) from the following: Business 7131X, Business 7200X, Business 7202X, Business 7204X, Business 7208X, Business 7210X, Business 7212X, [Business 7216X] or Finance 7216X, Business 7220X,, [Business 7240] or Finance 7240X, Business 7250X or Psychology 7246G, Business 7255X or Psychology 7247G, Business 7257X, 7260X, 7265X, 7278X, 7279X, 7290X, 7203X or Television and Radio 7727X, Economics 7215X or [Business 7215X] or Finance 7215X, Economics or Business 7230X, Economics 7027X, Economics 7028X, Economics 7030X, Economics 7060X or Health and Nutrition Sciences 7144X, and Economics 7095G. With the permission of the graduate deputy chairperson, students may be allowed to take up to 6 credits of other courses to complete the 18 credit requirement in Option 2.

Option 3. Accounting

A minimum of 18 credits (6 courses) from the following: Accounting 7108X, Accounting 7109X, and at least two additional courses with an Accounting prefix; Business 7131X or Accounting 7131X; [Business 7215X] or Finance 7215X or Economics 7215X, [Business 7216X] or Finance 7216X, Business 7230X, [Business 7240X] or Finance 7240X, Business 7260X, and Business 7290X. With the permission of the graduate deputy chairperson, students may be allowed to take up to 6 credits of other courses to complete the 18 credit requirement in Option 3.

Option 4. General Business.

A total of 33 credits with a minimum of 18 credits (6 courses) from any Business graduate course. As noted above, the 5 graduate program core classes may be substituted by additional Business courses with permission of the graduate deputy.

Option 5. Business Intelligence and Data Analysis

A total of 33 credits. The required courses for this option are: Economics 7000X or Business 7206X; Economics 7010X or Economics 7215X or Finance 7215X; Economics 7025X for students who have not taken at least one year of calculus; Business 7276X, Business 7278X, Business 7279X or Business 7290X, Business 7230X or Economics 7230X, Economics 7020X, and Economics 7021X.
With the permission of the graduate deputy chairperson, students will be advised which additional courses to take to complete the 33 credits.

CUNY Ph.D.

The City University of New York offers a doctoral program in economics. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Economics Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Economics Department and the executive officer of the doctoral program.

Courses

ECON 7000X Microeconomics

30 hours plus conference; 3 credits
Supply and demand analysis. Economics of households and firms. Determination of product and factor prices under different market structures. Capital theory and welfare economics. Spring term.

Prerequisite: Economics 7010X [710X] and 7025X [725.1X], or the equivalent.

ECON 7010X Macroeconomics

30 hours plus conference; 3 credits
Factors determining the level of national income, output, and employment. Consideration of business cycle theories and of public and private policies to stabilize employment and prices. Fall term.

ECON 7020X Econometrics

30 hours plus conference; 3 credits
Introduction to simple and multiple regression analysis, and analysis of variance. General linear model. Introduction to econometric modeling and techniques with an emphasis on applied econometrics. Applications to economics. Fall term.

Prerequisite: undergraduate courses in statistics

ECON 7021X Advanced Econometrics

30 hours plus conference; 3 credits
Advanced econometric model building. Econometric principles for cross-sectional, panel, and time-series data sets. Applications to economics. Spring term.

Prerequisite: Economics 7020X [720X] or the equivalent.

ECON 7025X Mathematical Methods in Economics I

30 hours plus conference; 3 credits
Intended for economics students with little or no preparation in calculus. Mathematical topics frequently used in economics selected from matrix algebra, differential calculus, and partial differentiation. Development of mathematical concepts in the context of economic models. Relation of mathematical methods to their application in economics. Fall term.

ECON 7026X Mathematical Methods in Economics II

30 hours plus conference; 3 credits
Similar to Economics 7025X [725.1X]. Study of mathematical tools chosen from integral calculus, elementary difference, and differential equations.

Prerequisite: Economics 7025X [725.1X] or the equivalent background in mathematics.

ECON 7027X International Trade

30 hours plus conference; 3 credits
Gains from trade, absolute and comparative advantage, and the determination of patterns of trade. The classical model, the endowment model, and the specific factor model. Imperfect competition and government policies as determinants of trade. Increasing returns to scale. Trade and factor movements in the international economy. Empirical tests of trade models. Tariffs, nontariff barriers, administered protection. Quotas, and other nontariff barriers. Effects of trade policies on employment, prices, income distribution, and national economic welfare. Case studies.

Prerequisite: one undergraduate course in macroeconomics and one undergraduate course in microeconomics.
Prerequisite or corequisite: Economics 7025X [725.1X].

ECON 7028X International Economics and Finance

30 hours plus conference; 3 credits
The foreign exchange market, international financial markets, and the determination of the equilibrium exchange rate. Price levels and the exchange rate in the long run; output and the exchange rate in the short run. Foreign exchange intervention. Capital mobility. Monetary and asset market approach to the balance of payments. International macroeconomic policy and the international monetary system.

Prerequisite: one undergraduate course in macroeconomics and one undergraduate course in microeconomics.
Prerequisite or corequisite: Economics 7025X [725.1X].

ECON 7030X Government Finance

30 hours plus conference; 3 credits
Economic problems and issues in federal, state, and local government finance. Evaluation of budgetary concepts and procedures. Analysis of the impact of taxation, government borrowing, and expenditures on resource use and on distribution of income and wealth.

Prerequisite: one undergraduate course in macroeconomics and one undergraduate course in microeconomics.

Prerequisite or corequisite: Economics 7025X [725.1X].

ECON 7040X Evolution of Modern Economic Thought

30 hours plus conference; 3 credits
Ideas from medieval times to the nineteenth century. English classical doctrine and variants. Critical schools and reformers.

ECON 7045X Current Problems in Monetary and Fiscal Policy

30 hours plus conference; 3 credits
Recent developments and current practices in the monetary and fiscal system. Their effects on money stock, money flows, and the liquidity of the economy. Modern ideas of monetary management, techniques of central banking, public debt management, relevant tax and expenditure policies of government. Potential contribution of monetary and fiscal policy to economic growth and to general problems of stability of employment, income, and price levels.

Prerequisite: one undergraduate course in macroeconomics and one undergraduate course in microeconomics.
Prerequisite or corequisite: Economics 7025X [725.1X].

ECON 7050X Analysis of Developed Areas

30 hours plus conference; 3 credits
Factors responsible for differences in rates of economic growth in developed areas.

ECON 7055X Comparative Economics Systems

30 hours plus conference; 3 credits
Capitalism and other methods of organizing economic activity. Emphasis on the price system and central planning.

ECON 7060X Health Economics

30 hours plus conference; 3 credits
Economic analysis of the structure, performance, and government policy in the health care sector of the economy. Demand and supply of health care services, the role of third party payers, and the public policy debate over government reform of the health care system. Microeconomic, econometric, and political philosophy concepts relevant to issues of justice in health care. This course is the same as Health and Nutrition Sciences 7144X [772.5X].

ECON 7090X Special Topics

30 hours plus conference; 3 credits
Topics vary from term to term. Students may take this course two times, but may not repeat topics.

Prerequisite: permission of the graduate deputy chairperson.

ECON 7091G Independent Reading

Minimum of 135 hours of independent work and conference; 3 credits
Independent research, supervised by a member of the department. This course may be used as a stage in the preparation of a master's thesis.

Prerequisite: completion of Economics 7010X [710X], 7020X [720X], 7025X [725.1X], 7000X [700X], and 7021X [721X] with grades of A or B in all courses; and permission of the graduate deputy chairperson.

ECON 7095G Thesis Research

Hours to be arranged; 3 credits
Research for master's thesis supervised by a faculty member. Students register for this course only once.

Prerequisite: completion of Economics 7010X [710X], 7020X [720X], 7025X [725.1X], 7000X [700X], and 7021X [721X] with grades of A or B in all courses; and permission of the graduate deputy chairperson.

ECON 7205X Managerial Economics

30 hours plus conference; 3 credits
An introduction to microeconomic concepts - demand, cost, profit, pricing strategies, forecasting - with applications to managerial decision making. (Not open to students who have completed Economics 7000X [700X].) This course is the same as Business 7205X [705X].

ECON 7215X Money and Capital Markets

30 hours plus conference; 3 credits
Sources and uses of funds in financial markets. Market structure of interest rates. Flow of funds analysis. This course is the same as [Business 7215X] and Finance 7215X,

Prerequisite: undergraduate course in macroeconomics.

ECON 7230X Operations Research and Decision Sciences

30 hours plus conference; 3 credits
Tools and techniques of operations research and decision sciences. Quantitative techniques used in business, accounting, and economics including project design and management, scheduling, forecasting, linear programming, inventory and queuing theory, applications of input-output methods. This course is the same as Business 7230X.

ECON 7309X Economics of Environmental Protection and Resource Conservation

30 hours plus conference; 3 credits
Economic aspects of pollution and resource conservation. Sources and environmental effects of common pollutants. Spatial aspects of pollution and resource depletion. Economics of recycling as a solution to problems of waste disposal and resource depletion. Applications of environmental and conservation economics to current problems in industrial location, city planning, population, and economic growth.

Prerequisite: completion of the Level I requirement.

The following inactive course(s) will only be offered if there is sufficient demand:

ECON 7301X Introduction to Marxian Economic Analysis

ECON 7303X Economics of Human Resources and Labor Markets

ECON 7306X Industrial Organization and Control

English

Department office: 2308 Boylan Hall
Phone: 718.951.5195

Full-time Faculty

Distinguished Professors: Alterman, Wellman

Professors: Agoos, Alterman, Bayoumi, Brooks, Brownstein, Cheng, Davis, Elsky, Fox, Gonsalves, Harrison, Henkin, Lerner, Mancini, Masciandaro, Mengestu, Moser, Moses, Natov, Patkowski, Pollard, Reeves, Tremper, Viscusi, Wellman

Associate Professors: Acosta, Entin, Frydman, Howell, King, Lutzkanova-Vassileva, Marks, Nadell, Rutkoski, Steel, Streiter

Assistant Professors: Nissenbaum, Phillips, Siegel

Lecturers: Burgess, Courtney, Goldman, Minter

The Department of English is widely recognized for its distinguished faculty and large selection of courses that explore many important genres and subjects, from classic literature and aspects of the English language to various periods in drama and categories of literary theory. The richness of the curriculum provides virtually limitless opportunities to explore, appraise, and critique the works of the English language.

M.A. degree program in English
HEGIS code 1501; SED program code 02044

The master of arts in English program immerses students in literature dating from the Middle Ages through the present. Through the study and analysis of a variety of literary texts, critical and theoretical approaches (including, among others, new historicism, reader-response theory, deconstruction, feminist criticism, and post-colonial studies), and historical concepts, students are afforded the opportunity to develop individual interpretations of texts and to evaluate controversies surrounding the canon. Small-group tasks, oral presentations, short papers, and longer research papers complement lectures, discussions, and examinations. Travel and research grants are available to our students, several of whom have presented at graduate colloquia at Brooklyn College and at other universities throughout the country and abroad, or have had papers accepted for publication in journals.

Our graduates have found new employment or enhanced their present careers in diverse fields including education, publishing, writing for both for-profit and non-profit organizations. Others have been accepted into doctoral programs.

Matriculation requirements

Applicants must offer at least 15 credits in advanced courses in English literature.

Applicants must have a minimum undergraduate grade point average of 3.00.

Applicants must submit a sample of critical writing of about ten pages, and a two-page statement of academic purpose.

Foreign applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 650 on the paper-based test or 280 on the computer-based test, or 114 on the Internet-based test before being considered for admission.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty-three credits are required for the degree.

Courses in English and comparative literature are grouped in the following areas of study:

1. Literature before 1500: English 7101X, 7102X, 7103X, 7120X, CMLT 7130X.
2. Literature from 1500 to 1800: English 7201X, 7202X, 7205X, 7206X, 7203X, 7204X, 7220X, CMLT 7230X.
3. Literature from 1800 to 1900: English 7301X, 7302X, 7303X, 7304X, 7305X, 7320X, CMLT 7330.
4. Literature from 1900 to the present: English 7401X, 7402X, 7403X, 7404X, 7405X, 7406X, 7420X, CMLT 7430X.
5. Theory and criticism: English 7508X, 7501X, 7502X, 7503X, 7504X, 7505X, 7506X, 7507X, 7520X.
6. Language: English 7601X, 7602X, 7603X, 7604X, 7605X, 7620X.

The following courses are required: English 7501X; English 7800X; English 7810X; one course from five of the six areas of study; two electives. Students must complete English 7501X, which satisfies the area 5 requirement, in one of their first two semesters in the program

Students must consult with an advisor to choose one area in which to complete three courses in total for a specialization.

Early in the first term, students must have a program of study approved by the English Department.

Students must submit a thesis acceptable to the department on a subject related to their area of specialization.

Students must pass the English Department M.A. French or Spanish examination or a test administered by the Department of Modern Languages and Literatures or they must pass a foreign language course acceptable to the deputy chairperson. The foreign language requirement may be waived for a native speaker with permission of the English graduate deputy.

Courses in the English Department offered toward the degree must be 7000-level courses.

M.F.A. degree program in creative writing
HEGIS code 1507; SED program code 02056

Our small, highly personal two-year program confers a master of fine arts degree in creative writing in fiction, poetry, or playwriting. The program offers single-discipline and inter-genre workshops, literature seminars, small-group reading tutorials, and one-on-one tutorials, which all emphasize relationships between eminent faculty members and students. Additionally, students have the opportunity to work on The Brooklyn Review and give public readings/performances in Brooklyn and Manhattan. The program offers some fellowships as well as prizes and a winter writing residency at the Espy Foundation in Oysterville, Washington. Students may also teach undergraduate courses for the English Department.

Our graduates have had their work published widely and have won competitions sponsored by the Iowa Review, the Colorado Review, the Mississippi Review, and Zoetrope. They have been included in The Best New Young Poets anthology and The Best American Short Stories. Our playwrights have won Obies, started theater companies, and had their plays produced here and abroad.

Students choose a concentration in one of the following: fiction, playwriting, or poetry.

Matriculation requirements

Fiction and Poetry: Applicants must offer at least 12 credits in advanced courses in English. Thirty pages of original fiction or twenty pages of original poetry must be submitted for evaluation.

Playwriting: Applicants must offer at least 12 credits in advanced courses in English or theater. One original full-length play or two or more original one-act plays must be submitted for evaluation.

Applicants who do not meet course requirements but whose manuscripts show unusual talent are considered for admission. Manuscripts should be submitted directly to the deputy chairperson in the English Department at the time of application. Applications are not considered for spring semester admission.

Foreign applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 650 on the paper-based test or 280 on the computer-based test or 114 on the internet-based test before being considered for admission.

General matriculation and admission requirements of the Division of Graduate Studies are in the chapter "Admission."

Degree requirements

Thirty-six credits are required for the degree.

Students must complete one of the following concentrations. The fiction concentration consists of 27 credits. The poetry and playwriting concentrations consist of 24 credits.

Fiction:
English 7910X to be taken in the first semester. English 7912X to be taken four times, but not more than once in any semester; English 7911X to be taken two times in the first year, but not more than once in any semester; English 7913X to be taken two times in the second year, but not more than once in any semester.

Poetry:
English 7922X to be taken four times, but not more than once in any semester; English 7923X to be taken four times, but not more than once in any semester.

Playwriting:
English 7932X to be taken four times, but not more than once in any semester; English 7933X to be taken four times, but not more than once in any semester.

Students in the fiction concentration must complete 9 credits in three courses, and students in the poetry and playwriting concentrations must complete 12 credits in four courses chosen from the 7000-level courses in the English Department (including courses in comparative literature).

Students may substitute for no more than two such courses any two 7000-level courses from the Departments of Art, History, Modern Languages and Literatures, Philosophy, Speech, Television and Radio, or Theater, or the Conservatory of Music. Students may substitute one writing workshop or tutorial outside of their major writing concentration for one literature course.

Permission to register for any of these substitute courses may be required from the graduate deputy chairperson of the appropriate department.

A substantial manuscript must be submitted and filed according to instructions available from the deputy chairperson. Students concentrating in fiction or poetry must submit original creative writing, in publishable form, such as a novel or collection of stories or poems. Students concentrating in playwriting must submit a full-length play or a number of one-act plays, in producible form, that would constitute a theatrical production. In cooperation with the Theater Department, efforts are made to produce the student's major work.

Recommendations

Students are urged to take one workshop, one tutorial, and one literature course each semester in order to complete the program in four semesters. A reading knowledge of a foreign language is strongly recommended.

M.A. degree program in education: English teacher (7-12) HEGIS code 1501.01; SED program code 26811

The M.A. programs in English education leading to Initial Certification and/or Professional Certification for English teachers grades 7-12 are designed for students who plan to teach or are currently teaching. The programs offer experienced and beginning teachers opportunities to develop their classroom practice and to expand their knowledge of English education and the field of education as a whole. Courses are taught by nationally known scholars, many of whom have had experience teaching at secondary levels. Our programs combine rigorous and rewarding study in literature and composition with intensive study of curriculum, pedagogy, and schools.

The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the Department of Secondary Education for the current requirements.

Matriculation requirements

Applicants must offer at least 15 credits in advanced courses in English.

Applicants must also offer (a) or (b) or (c):

(a) New York State Initial Certification in teaching English for grades 7-12; or courses in education that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching English at appropriate age levels; 100 hours of fieldwork; 300 hours or 40 full days of student teaching English at appropriate grade levels, or one year of full-time teaching English at appropriate grade levels, and passagae of edTPA.

(b) an undergraduate degree with a major in English, or appropriate coursework in English;

(c) an undergraduate major in English, the Content Specialty Test CST, an approved 200 hours preparation program and a position at an approved public school through which students can accrue on-the-job training to substitute for student teaching.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the head of the program in English education and the chair or graduate deputy of the English Department.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 650 on the paper-based test or 280 on the computer-based test or 114 on the internet-based test, before being considered for admission.

Students should note additional requirements found in the sections "Admission" and "Academic Regulations and Procedures" in the Graduate Bulletin.

Degree requirements

Thirty to forty-six credits are required for the degree.

Students must complete 18 credits in courses in English.

Students enroll in the appropriate course of studies listed below (Option A or B or C) based upon teaching experience, previous course work, and the teaching certificates they hold.

Option (A): 30 credits

Students who possess Initial Certification in teaching English or its equivalent must complete the following courses in English: English 7010X and 7011X. In addition, students must complete a course in four of the seven areas of study listed under the M.A. in English in the Bulletin, as follows: three courses from areas 1-5 and 7, excluding English 7507X; and one course from area 6. Student must also complete 12 credits in courses in Education as follows: SEED 7502T, 7508T, 7548X and 7521T.

Option (B): 30-46 credits

Students who do not possess Initial Certification in teaching English or its must complete the following courses in English: English 7010X, English 7011X and English 7507X.

In addition, and with advisement from the chair or graduate deputy of the English department, students must complete a course in two of the seven areas of study listed under the M.A. in English in the Bulletin, as follows: two courses from areas 1-4 and 7; and one course from area 6. Depending on previous coursework, students must also complete some or all of the following courses in Secondary Education: SEED 7500X, 7501X, 7531T, 7542T, 7514T, 7543T, 7502T, 7508T, 7521T, and 7671T.

Option (C): 36 credits

Students who are teaching or have secured a position teaching English and who are pursuing an Alt B Certificate must complete the following courses in English: English 7010X, English 7011X and English 7507X. In addition, and with advisement from the chair or graduate deputy of the English department, students must complete a course in two of the seven areas of study listed under the M.A. in English in the Bulletin, as follows: two courses from areas 1-4 and 7; and one course from area 6. Students pursuing an Alt B Certificate may substitute their teaching job for student teaching but upon consultation with their advisor must still register for SEED 6002T and must take SEED 7500X, 7531T, 7514T, 7502T, 7671T, and 7508T.

All students must pass a written comprehensive examination administered by the English Department at the end of their program. Information about the comprehensive examination is in the section of the "Academic Regulations and Procedures."

Courses in the English Department and the School of Education offered toward the degree must be 7000-level courses.

Students pursuing an M.A. English Teacher must have taken or must take courses that meet the New York State and National Council of Teachers of English NCTE English standards. Transcript review will determine what appropriate course work students must take.

CUNY Ph.D.

The City University of New York offers a doctoral program in English. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." English Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the English Department and the executive officer of the doctoral program.

Courses

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

Candidates for a master's degree in another department may take courses in English on the 7000 level with permission of the deputy chairperson of the English Department.

Creative writing

ENGL 7911X Reading Fiction

30 hours plus conference; 3 credits
Advanced textual analysis of selected literary works; creative writing related to these works. Weekly course meetings for first-year students in the M.F.A. Fiction program. This course may be taken two times in the first year but not more than once in any semester. Topic to be chosen by the instructor.

Prerequisite: matriculation in the creative writing program with a concentration in fiction or permission of the deputy chairperson.

ENGL 7912X Fiction Workshop

30 hours recitation, 30 hours lab; 3 credits
Detailed examination in seminars of stories or segments of novels written by class members. This course may be taken four times, but not more than once in any semester.

Prerequisite: matriculation in the creative writing program with a concentration in fiction or permission of the deputy chairperson.

ENGL 7913X Craft of Fiction

Hours to be arranged; 3 credits
Intensive examination of the student's fiction. Advice on the preparation of a substantial manuscript in publishable form. The course may be taken two times, but not more than once in any semester.

Prerequisite: matriculation in the creative writing program with a concentration in fiction or permission of the deputy chairperson.

ENGL 7922X Poetry Workshop

30 hours recitation, 30 hours lab; 3 credits

Detailed examination in seminars of poems written by class members. This course may be taken four times, but not more than once in any semester.

Prerequisite: matriculation in the creative writing program with a concentration in poetry or permission of the deputy chairperson.

ENGL 7923X The Craft of Poetry

Hours to be arranged; 3 credits
Intensive examination of the student's poetry. Advice on the preparation of a substantial manuscript in publishable form. The course may be taken four times, but not more than once in any semester.

Prerequisite: matriculation in the creative writing program in poetry or permission of the deputy chairperson.

ENGL 7932X Playwriting Workshop

30 hours recitation, 30 hours lab; 3 credits
Detailed examination in seminars of scenes or plays written by class members and selections from contemporary dramatic literature. This course may be taken four times, but not more than once in any semester.

Prerequisite: matriculation in the creative writing program with a concentration in playwriting or permission of the deputy chairperson.

ENGL 7933X Craft of Playwriting

Hours to be arranged; 3 credits
Intensive examination of the student's plays. Advice on the preparation of a substantial manuscript in producible and/or publishable form. The course may be taken four times, but not more than once in any semester.

Prerequisite: matriculation in the creative writing program in playwriting or permission of the deputy chairperson.

ENGL 7940X Group Literature Tutorial

30 hours plus conference; 3 credits
Advanced textual analysis of selected literary works and creative writing related to these works and to the M.F.A. project. The course will substitute for one of the four literature courses required for the M.F.A. degree. Weekly course meetings and individual tutoring.

Language and literature

ENGL 6000X Advanced Academic Writing for International Students

30 hours plus conference; 3 credits
Intensive study of and practice in writing English at the advanced level of ESL to increase students' abilities to write well-organized and well-developed essays, research papers, analyses, and/or theses in clear, fluent language. Includes individual and group work. The course may be repeated with the instructor's permission. Open to graduate students from all departments.

Prerequisite: open to non-native speakers

ENGL 7010X Children's and Adolescents' Literature

30 hours plus conference; 3 credits
Survey of literature written for children from preschool through adolescence; consideration of related issues such as developing approaches that will promote critical reading and thinking and selecting literature that is appropriate in our multicultural society.

ENGL 7011X Literary Texts and Critical Methods

30 hours plus conference; 3 credits
Introduction to practical criticism, bibliographical methods, and literary criticism as a genre. Reading and analysis of several genres of literature from several historical periods. Analysis of representative texts, literary periods and literary history, and critical approaches including structuralism, post-structuralism, feminism, post-colonialism, and new historicism.

ENGL 7101X The Canterbury Tales

30 hours plus conference; 3 credits
Literary and linguistic analysis of the stories in Chaucer's final work.

ENGL 7102X Chaucer's Work Exclusive of The Canterbury Tales

30 hours plus conference; 3 credits
Emphasis on The Book of the Duchess, The House of Fame, The Parliament of Fowls, Troilus and Criseyde, The Legend of Good Women.

ENGL 7103X Literature of the Middle Ages

30 hours plus conference; 3 credits
Selected literary works drawn primarily but not exclusively from British and other European literatures, 700-1500. (Not open to students who have completed English 718X.)

ENGL 7120X Seminar in Textual Analysis

30 hours plus conference; 3 credits each term
Intensive study in selected texts. Selection of authors varies from year to year at the discretion of the instructor. Seminars are offered as follows: 7120X [791X], area 1; 7220X [792X], area 2; 7320X [793X], area 3; 7420X [794X], area 4; 7520X [795X], area 5; 7620X [795.6X], area 6; 7720X [795.7X], area 7. With the permission of the graduate deputy, students may take a seminar in the same area twice if the topics are different.

ENGL 7201X Early Modern Literature

30 hours plus conference; 3 credits
Selected works in prose and verse drawn primarily but not exclusively from British and other European literatures of the sixteenth and seventeenth centuries.

ENGL 7202X Milton

30 hours plus conference; 3 credits
Critical study of Milton's lyric, epic, dramatic poems.

ENGL 7203X Early Modern Drama Exclusive of Shakespeare

30 hours plus conference; 3 credits
Selected works drawn primarily but not exclusively from British and other European dramas, 1450 to 1660. (Not open to students who have completed English 716X.)

ENGL 7204X Shakespeare

30 hours plus conference; 3 credits
Problems of interpretation in relation to selected comedies, histories, tragedies. (Not open to students who have completed English 736X.)

ENGL 7205X Literature of the Long Eighteenth Century

30 hours plus conference; 3 credits
Reading and analysis of major works, exclusive of the novel, drawn primarily but not exclusively from British and other European literatures produced 1660 to 1800.

ENGL 7206X The Novel in the Eighteenth Century

30 hours plus conference; 3 credits
Selected novels drawn primarily but not exclusively from British and other European literatures.

ENGL 7220X Seminar in Textual Analysis

30 hours each term; 3 credits each term
Intensive study in selected texts. Selection of authors varies from year to year at the discretion of the instructor. Seminars are offered as follows: 7120X [791X], area 1; 7220X [792X], area 2; 7320X [793X], area 3; 7420X [794X], area 4; 7520X [795X], area 5; 7620X [795.6X], area 6; 7720X [795.7X], area 7. With the permission of the graduate deputy, students may take a seminar in the same area twice if the topics are different.

ENGL 7301X Nineteenth-Century Literature I

30 hours plus conference; 3 credits
Selected literary works of the first half of the nineteenth century drawn primarily but not exclusively from British and other European literatures.

ENGL 7302X Nineteenth-Century Literature II

30 hours plus conference; 3 credits
Selected literary works of the second half of the nineteenth century drawn primarily but not exclusively from British and other European literatures.

ENGL 7303X American Literature of the Nineteenth Century I

30 hours plus conference; 3 credits
Literature primarily but not exclusively of the United States, up to 1865. (Not open to students who have completed English 749X.)

ENGL 7304X American Literature of the Nineteenth Century II

30 hours plus conference; 3 credits
Literature primarily but not exclusively of the United States, after 1860. (Not open to students who have completed English 749X.)

ENGL 7305X The Novel in the Nineteenth Century

30 hours plus conference; 3 credits
Selected novels of the nineteenth century drawn primarily but not exclusively from British and other European literatures.

ENGL 7320X Seminar in Textual Analysis

30 hours each term; 3 credits each term
Intensive study in selected texts. Selection of authors varies from year to year at the discretion of the instructor. Seminars are offered as follows: 7120X [791X], area 1; 7220X [792X], area 2; 7320X [793X], area 3; 7420X [794X], area 4; 7520X [795X], area 5; 7620X [795.6X], area 6; 7720X [795.7X], area 7. With the permission of the graduate deputy, students may take a seminar in the same area twice if the topics are different.

ENGL 7401X American Poetry of the Twentieth Century

30 hours plus conference; 3 credits
Major tendencies of the period as exemplified in the poetry and criticism.

ENGL 7402X Poetry of the Twentieth Century

30 hours plus conference; 3 credits
Characteristic works of major authors drawn primarily but not exclusively from British and other European literatures. (Not open to students who have completed English 759X.)

ENGL 7403X Twentieth-Century American Fiction

30 hours plus conference; 3 credits
Selected short stories, novellas, and novels with focus primarily but not exclusively on fiction of the United States.

ENGL 7404X Twentieth-Century Fiction

30 hours plus conference; 3 credits
Selected short stories, novellas, and novels with focus primarily but not exclusively on fiction of Britain and other European countries.

ENGL 7405X Modern Irish Literature

30 hours plus conference; 3 credits
Major Irish writers from 1885 to the present, including Yeats, Synge, Joyce, O'Casey.

ENGL 7406X Twentieth-Century Drama

30 hours plus conference; 3 credits
Selected works primarily but not exclusively by modern and postmodern American and British and other European playwrights. (Not open to students who have completed English 758X.)

ENGL 7420X Seminar in Textual Analysis

30 hours each term; 3 credits each term
Intensive study in selected texts. Selection of authors varies from year to year at the discretion of the instructor. Seminars are offered as follows: 7120X [791X], area 1; 7220X [792X], area 2; 7320X [793X], area 3; 7420X [794X], area 4; 7520X [795X], area 5; 7620X [795.6X], area 6; 7720X [795.7X], area 7. With the permission of the graduate deputy, students may take a seminar in the same area twice if the topics are different.

ENGL 7501X Introduction to Critical Theory

30 hours plus conference; 3 credits
A general introduction to such major contemporary critical theories as structuralism, new criticism, Marxism, feminism, queer studies, poststructuralism, and postcolonialism.

ENGL 7502X Feminist Literary Theory

30 hours plus conference; 3 credits

The relations between women and literature; the development of feminist thought and its impact on literature and literary theory; definitions of feminist literary theory by contemporary writers.

ENGL 7503X Literature and Society

30 hours plus conference; 3 credits
Social factors conditioning the composition and enjoyment of literature. The place of literature (oral or written) as an institution in several historical periods or cultures.

ENGL 7504X Literature and Psychoanalytic Criticism: Theory and Practice

30 hours plus conference; 3 credits
A survey of theories in psychoanalytic criticism and an application of such theories in detailed analyses of selected literary works. Freudian, Jungian, and other psychoanalytic orientations discussed.

ENGL 7505X Postcolonial Literature and Theory

30 hours plus conference; 3 credits
Literary and philosophical responses to European colonialism and its aftermath. Readings are drawn from around the world to suggest the global character of the postcolonial condition.

ENGL 7506X Practicum in Teaching College-level English Composition

30 hours; 2 hours lecture + 2 hours lab; 3 credits
Theory and practice of teaching basic writing and English composition at the college level, and such related issues as evaluation, testing, invention, and rhetorical forms. Observation of and practice in teaching (planning lessons, evaluating and responding to student writing, discussion of readings, and tutoring) an undergraduate composition course (English 1010 [1] or 1012 [2]) as a tutor-intern for one class session (75 minutes per week) while mentored by an experienced composition teacher required.

ENGL 7507X Advanced Theories and Practice of Composition

30 hours plus conference; 3 credits
Theory and practice of teaching writing at the secondary level (grades 7-12), and such related issues as revision, evaluation, and teaching writing to English language learners. This course is the same as SEED 7548X [792.4X].

ENGL 7508X Literature and Folklore

30 hours plus conference; 3 credits
Significant folk tale patterns and themes as they occur in diverse cultures and literatures.

ENGL 7520X Seminar in Textual Analysis

30 hours each term; 3 credits each term
Intensive study in selected texts. Selection of authors varies from year to year at the discretion of the instructor. Seminars are offered as follows: 7120X [791X], area 1; 7220X [792X], area 2; 7320X [793X], area 3; 7420X [794X], area 4; 7520X [795X], area 5; 7620X [795.6X], area 6; 7720X [795.7X], area 7. With the permission of the graduate deputy, students may take a seminar in the same area twice if the topics are different.

ENGL 7601X History of the English Language

30 hours plus conference; 3 credits
The origins of the English language. Its development to the present.

ENGL 7602X Structure of Modern English

30 hours plus conference; 3 credits
Description of modern English based on modern linguistic theory. Comparison of traditional grammar with more recent grammars. Relation of written language to spoken language. Usage. (Not open to students who have completed English 725X.)

ENGL 7603X Introduction to Linguistics

30 hours plus conference; 3 credits
Introduction to phonology, morphology, syntax, semantics. Current problems in linguistic theory and methodology. (Not open to students who have completed English 726X.)

ENGL 7604X Language, Culture, and Society

30 hours plus conference; 3 credits
Examination of the various formulations of the interconnections among language, culture, and society. Focus on the interplay of language, society, and power with particular attention to issues of linguistic diversity based on gender and race, and to issues of multilingualism in education. Readings from the fields of linguistics, linguistic anthropology, philosophy, and literary theory. This course is the same as Liberal Studies 7005X [720X].

Prerequisite: none.

ENGL 7605X Applied Linguistics

30 hours plus conference; 3 credits
Applications of linguistic theories, methods, and findings to educational and social issues involving language, with a focus on adult second language learning, and college level language teaching and language assessment.

ENGL 7620X Seminar in Textual Analysis

30 hours plus conference; 3 credits each term
Intensive study in selected texts. Selection of authors varies from year to year at the discretion of the instructor. Seminars are offered as follows: 7120X [791X], area 1; 7220X [792X], area 2; 7320X [793X], area 3; 7420X [794X], area 4; 7520X [795X], area 5; 7620X [795.6X], area 6; 7720X [795.7X], area 7. With the permission of the graduate deputy, students may take a seminar in the same area twice if the topics are different.

ENGL 7720X Seminar in Textual Analysis

30 hours plus conference; 3 credits each term
Intensive study in selected texts. Selection of authors varies from year to year at the discretion of the instructor. Seminars are offered as follows: 7120X [791X], area 1; 7220X [792X], area 2; 7320X [793X], area 3; 7420X [794X], area 4; 7520X [795X], area 5; 7620X [795.6X], area 6; 7720X [795.7X], area 7. With the permission of the graduate deputy, students may take a seminar in the same area twice if the topics are different.

ENGL 7910X The Art of Fiction

30 hours recitation, 30 hours lab; 3 credits

Aspects of the craft of writing the novel from the perspective of a writer of fiction; topics include voice, tone, time, structure, character development, plotting, and ending.

Prerequisite: matriculation in the creative writing program in fiction or permission of the deputy chairperson.

Thesis and independent study

ENGL 7800X Introduction to Literary Research

30 hours plus conference; 3 credits
Introduction to methods of research and scholarly procedure as preparation for the M.A. Thesis. Topics include: building a bibliography, using print and on-line research sources; incorporating secondary critical resources; and the varieties of criticism practiced in recent decades. The final assignment is to produce a thesis proposal.

ENGL 7810X Thesis Project

30 hours plus conference; 3 credits
An extensive research project normally based on the thesis proposal developed in English 7800X [700X], which is supervised by a member of the faculty, and which leads to submission of a master's thesis. Students may receive credit for this course only after approval of the completed thesis.

Prerequisite: completion of English 7800X [700X]; approval of the graduate deputy chairperson

ENGL 7811X Independent Study

Hours to be arranged; 1 credit
Independent study of selected readings approved by a faculty advisor. One or more written reports, or final examination.

Prerequisite: approval of the graduate deputy chairperson.

CMLT 7130X Comparative Literature of the Medieval Period

45 hours; 3 credits
Comparative analysis of materials of the Medieval period that were originally composed in languages other than English but are available in translation, or of materials of this period that were originally composed in English from different countries and literary traditions. Focus on developing students' critical reading and analytical writing skills.

CMLT 7230X Comparative Literature 1500-1800

45 hours; 3 credits
Comparative analysis of Renaissance, Early Modern, or Eighteenth Century materials originally composed in languages other than English but available in translation, or of materials of this period that were originally composed in English from different countries and literary traditions. Focus on developing students' critical reading and analytical writing skills.

CMLT 7330X Comparative Literature 1800-1900

45 hours; 3 credits
Comparative analysis of Nineteenth Century materials originally composed in languages other than English but available in translation, or of materials of this period that were originally composed in English from different countries and literary traditions. Focus on developing students' critical reading and analytical writing skills.

CMLT 7430X Comparative Literature 1900-present

45 hours; 3 credits
Comparative analysis of Twentieth- and Twenty-first Century materials originally composed in languages other than English but available in translation, or of materials of this period that were originally composed in English from different countries and literary traditions. Focus on developing students' critical reading and analytical writing skills.

CMLT 7701X Studies in Literary Periods

30 hours plus conference; 3 credits
A single period, chosen from classical antiquity to the twentieth century, is studied intensively. The topic is announced each term.

CMLT 7702X Studies in Literary Genres

30 hours plus conference; 3 credits
Theory or history of a single literary genre, such as the epic, the drama, the lyric, the novel, is studied intensively. The topic is announced each term.

CMLT 7703X Studies in Special Authors

30 hours plus conference; 3 credits
An individual author in his or her international context. The author is announced each term.

Film

Department office: 201 West End Building
Phone: 718.951.5664

Full-time Faculty

Distinguished Lecturer: Reilly
Professors: Danto, Hanlon, Hirsch, Massood, Tutak, Wacks
Associate Professors: Christman, Geers, Hornsby
Assistant Professors: Andersen, Hernadez Anzola, Lindberg, Parmar, Voelpel
Lecturers: Khan, MacDonald

M.A. degree program in cinema studies
HEGIS code 1010; SED program code 36605

The Feirstein Graduate School of Cinema is committed to providing a comprehensive education in cinema history, theory, criticism, and aesthetics and to encourage the scholarly exploration of motion pictures as a form of art and a means of social communication. Students will complete a total of 36 credits, which may be pursued on either a full-time in 2 years or a part-time basis. Because the degree program will be housed in the same facility as the proposed M.F.A. in Cinema Arts (the Steiner Studios at the Brooklyn Navy Yard), students will be able to deepen their knowledge within the context of a larger community of filmmakers and cinema scholars. This program's interrelationship with the M.F.A. program will make it truly unique.

The Barry R. Feirstein Graduate School of Cinema offers a master arts degree in cinema studies. The two-year, 36-credit program provides a comprehensive education in cinema history, theory, criticism, and aesthetics, encompassing the scholarly exploration of motion pictures as a form of art and a means of social communication.

Matriculation Requirements

Applicants who have completed a bachelor's degree with a minimum GPA of 3.00 satisfy the undergraduate requirements of this program. General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree Requirements:

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36 credits are required for the degree.

Students must complete: FILM 7001G, 7002G, 7003G, 7015G.

Students must also complete 21 credits from the following list of electives: FILM 7011G, 7012G, 7021G, 7022G, 7031G, 7032G. Please Note: Topics for electives will change every semester so that students can take a particular course more than once.
Students must also complete either of the following courses: Comprehensive Examination - Supervised Reading, or Thesis Development.

M.F.A. degree program in cinema arts
HEGIS code 1010; SED program code 36817

The Barry R. Feirstein Graduate School of Cinema offers a master of fine arts degree in cinema arts with a concentration in one of the following areas: producing, directing, screenwriting, cinematography or post-production. The three-year, 66-credit program prepares students for professional careers in their area of concentration through a combination of practical and theoretical courses.

Matriculation Requirements

Applicants who have completed a bachelor's degree satisfy the undergraduate requirements of this program. General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree Requirements:

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66 credits are required for the degree.

All students must complete the following courses:

All of the following FILM 7013G, 7014G, 7015G, 7023G, 7801G, 7942G, 7964G

In addition, students must complete requirements in one concentration as follows:

Directing

All of the following courses: FILM 7101G, 7111G, 7121G, 7131G, 7201G, 7202G, 7301G, 7821G, 7831G, 7951G, 7961G
and
Two of the following courses: FILM 7011G, 7012G, 7021G, 7022G, 7502G, 7514G, 7522G, 7523G

Cinematography

All of the following courses: FILM 7201G, 7211G, 7221G, 7231G, 7302G, 7522G, 7523G, 7821G, 7831G, 7951G, 7961G
and
One of the following courses: FILM 7011G, 7012G, 7021G, 7022G, 7502G, 7514G, 7522G, 7523G

Producing

All of the following courses: FILM 7302G, 7401G, 7411G, 7412G, 7422G, 7423G, 7431G, 7531G, 7831G, 7951G, 7961G
and
Two of the following courses: FILM 7011G, 7012G, 7021G, 7022G, 7502G, 7514G, 7522G, 7523G

Screenwriting

All of the following courses: FILM 7301G, 7302G, 7303G, 7311G, 7312G, 7321G, 7322G, 7323G, 7331G, 7332G, 7952G, 7962G
and
One of the following courses: FILM 7011G, 7012G, 7021G, 7022G, 7502G, 7514G, 7522G, 7523G

Post-Production
All of the following courses: FILM 7302G, 7501G, 7502G, 7512G, 7513G, 7514G, 7521G, 7522G, 7523G, 7524G, 7531G, 7953G, 7961G
and
One of the following courses: FILM 7011G, 7012G, 7021G, 7022G, 7502G, 7514G, 7522G, 7523G

Courses

FILM 7001G Film Analysis and Research

60 hours; 3 credits
Formal analysis of the aesthetic implications of narrative film techniques and styles. Application of various critical perspectives. Bibliographical sources and research methods.

Prerequisite: Matriculation for the M.A. in Cinema Studies, the M.F.A. in Cinema Arts or permission of the program director.

FILM 7002G Film Theory

60 hours; 3 credits
Examination of major texts in classical and contemporary film theory influenced by aesthetics, phenomenology, linguistics, narratology, psychoanalysis, and theories of subjectivity and difference.

Prerequisite: Matriculation for the M.A. in Cinema Studies, the M.F.A in Cinema Arts, or permission of the program director.

FILM 7003G Film History/Historiography

60 credits; 3 hours
Comparison of historical movements and overview of major theories and issues in historiography, especially those particular to film.

Prerequisite: Matriculation for the M.A. in Cinema Studies, the M.F.A. in Cinema Arts, or permission of the program director.

FILM 7011G Film Directors

60 hours; 3 credits
Intensive study of the cinematic work of one or two film directors and the complex historical and cultural dynamics that shaped their oeuvre.

Prerequisite: Matriculation for the M.A. in Cinema Studies, the M.F.A. in Cinema Arts, or permission of the program director.

FILM 7012G Film Genres

60 hours; 3 credits
Analysis of the formal, aesthetic, and ideological paradigms of a particular genre. Consideration of various critical perspectives. Emphasis on the interaction between audience and text.

Prerequisite: Matriculation for the M.A. in Cinema Studies, the M.F.A. in Cinema Arts, or permission of the program director.

FILM 7013G World Cinema to 1960

60 hours; 3 credits
Overview of the international development of cinema as a medium and art form from 1895 to 1960. Focus on major film tendencies and aesthetic and political developments through a close examination of individual film texts. Emphasis will be placed on the major historical currents of each period and on changes in aesthetic, political and industrial context.

Prerequisite: Matriculation for the M.A. in Cinema Studies, for the M.F.A. in Cinema Arts, or permission of the program director.

FILM 7014G Narrative Structure

60 hours; 3 credits
An exploration of the principles and process of effective storytelling. Beginning with Aristotle's
Poetics and continuing to contemporary approaches, the aim of the course is to develop an
understanding of the elements of narrative structure that produce a compelling screenplay and an

engaging work of cinema.

Prerequisite: Matriculation in the M.F.A. in Cinema Arts or permission of the program director

FILM 7015G Integrated Media

60 hours; 3 credits
This course provides an opportunity to investigate the impact of the rapidly evolving media
environment on contemporary cinema. Students will venture beyond the confines of the traditional
media categories and explore the implications of new convergent thinking and technology. Includes
both a theoretical understanding of the issues as well as an opportunity to create work across platforms.

Prerequisite: Matriculation in the M.F.A. in Cinema Arts, the M.A. in Cinema Studies, or permission of the program director.

FILM 7021G National Cinemas

60 hours; 3 credits
Study of the complex cultural, artistic, intellectual, social, economic, political, historical, and aesthetic dynamics of a national cinema.

Prerequisite: Matriculation for the M.A. in Cinema Studies, the M.F.A. in Cinema Arts, or permission of the program director.

FILM 7022G Global Cinemas

60 hours; 3 credits
Survey of a major cinema tradition that transcends national borders. Themes selected according to
political, aesthetic, or cultural traditions shared by people across the globe.

Prerequisite: Matriculation for the M.A. in Cinema Studies or the M.F.A. in Cinema Arts, or permission of the program director.

FILM 7023G World Cinema 1960 to present

60 hours; 3 credits
Overview of the international development of cinema as a medium and art form from 1960 to the present. Focus on major film tendencies and aesthetic and political developments through a close examination of individual film texts. Emphasis will be placed on the major historical currents of each period and on changes in aesthetic, political and industrial context.

Prerequisite: Film 7013G; Matriculation in the M.A. in Cinema Studies, in the M.F.A. in Cinema Arts, or permission of the program director.

FILM 7031G Special Topics in Film Theory

60 hours; 3 credits
An in-depth consideration of a single issue in film theory. Topics vary from term to term, but may
include a focus on a particular theorist's body of work, a topic, such as psychoanalysis, or a theoretical approach to film form.

Prerequisite: Matriculation for the M.A. in Cinema Studies, the M.F.A. in Cinema Arts, or permission of the program director.

FILM 7032G Special Topics in Film History

60 hours; 3 credits
Examination of one topic in film in relation to its historical, cultural, technological and theoretical
contexts. Topics vary from term to term.

Prerequisite: Film 7003G or permission of the program director.

FILM 7101G Directing Workshop

60 hours; 3 credits
Analysis of the work of master filmmakers that may include Chaplin, Hitchcock, Wyler, Wilder,
Truffaut, Tarkovsky, Bertolucci, Bergman, Coppola, Kieslowski, Polanski, Wes Anderson and others.
Students study directorial techniques and aesthetic choices that are employed by visionary directors.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7111G Directing the Camera

60 hours; 3 credits
A hands-on course that investigates ways to design shots, scenes and sequences for specific dramatic purposes in service of the script.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts (Specialization in Directing) and permission of the program director.

FILM 7121G Directing the Actor

60 hours; 3 credits
Students direct character-driven scenes using a variety of approaches and examine different directorial techniques to learn how to translate character psychology into behavior. They will work with actors on character development and scene development through a series of improvisations and other exercises. Each student will be responsible for developing and directing an individual scene.

Prerequisite: Matriculation for the M.F.A. in Cinema Production and permission of the program director.

FILM 7131G Advanced Directing Workshop

60 hours; 3 credits
The purpose of this course is to provide students with a theoretical and practical understanding of the art and technique of directing. While the class covers a wide range of issues relevant to directing, the focus is on: script analysis, directing actors, and directing camera The goal is to learn to analyze a screenplay from a director's perspective, to work with actors to secure believable performances, and to design shots in service of the narrative.

Prerequisite: Matriculation for M.F.A. in Cinema Production, and permission of the program director. Open only to 2nd Year Directing Students preparing to shoot their thesis film.

FILM 7201G Cinematography I

60 hours; 3 credits
This course provides grounding in all aspects of professional cinematography, both theoretical and
practical. From the use of professional motion picture cameras, lenses, and other equipment, to the
study of composition and lighting, students will develop an understanding of the art and techniques of
cinematography.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7202G Cinema Aesthetics

60 hours; 3 credits
Overview and historical review of the creative and technical choices made through the collaboration
between director and cinematographer. Formal elements and choices in the filmmaking process,

including visual storytelling, storyboarding, composition, blocking, mise-en-scene, rhythm, coverage,
use of location, sets, and art direction are all explored.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7211G Cinematography II

60 hours; 3 credits
This is the second of a four-workshop sequence designed specifically for cinematographers. This
hands-on course involves extensive examination and use of advanced digital motion picture cameras
and lenses. Lighting techniques for digital formats will be explored in depth through practical
exercises.

Prerequisite: FILM 7201G

FILM 7212G Digital Aesthetics

60 hours; 3 credits
Analysis and practice of the aesthetics of digital cinema. Benefits and challenges of digital cinema acquisition, post-production, and distribution.

Prerequisite: Cinema Aesthetics (Film 7202G)

FILM 7221G Cinematography III

60 hours; 3 credits
This is the third of a four-workshop sequence designed specifically for cinematographers. Class topics will include Steadicam, car shots, aerial/underwater cinematography, motion control, special optics, high-speed cinematography, and 3D stereography. Guest cinematographers and specialists participate in the workshop to conduct specialized seminars and demonstrations as well as to provide feedback on student work.

Prerequisite: FILM 7211G

FILM 7231G Cinematography IV

60 hours; 3 credits
This is the fourth workshop in the sequence designed specifically for cinematographers. Students will be exposed to several different scenarios to develop advanced skills in visual storytelling. Each student will practice pre-visualization techniques and production of the key aesthetic elements, including color, contrast, shot selection, camera movement and placement.

Prerequisite: FILM 7221G

FILM 7301G Screenwriting

60 hours; 3 credits
An intensive workshop examining visual-dramatic storytelling and the fundamental elements of the
narrative screenplay. Topics covered include character, conflict, dialog, story structure, subtext, theme, locale, scene structure, sequence and screenplay format. All students develop a concept, create a detailed step-outline and complete several drafts of a short screenplay.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7302G Script Analysis and Development

60 hours; 3 credits
Through the analysis of successful film scripts with a focus on premise, structure, character, time and causality, tone and genre, students develop an in-depth understanding of story from seed idea through script.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7303G Reading (Screen)writers

60 hours; 3 credits
Study and textual analysis of important American and International works of cinema from the writer's
perspective .

Prerequisite: FILM 7014G

FILM 7311G Scene Writing Workshop

60 hours; 3 credits
An intensive exercises in scene writing. Focus on subtext, point of view, dialogue, visual language, tone and genre, conflict, and characterization.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7312G Advanced Screenwriting 1

60 hours; 3 credits
An intensive workshop course dedicated to mastering the fundamentals of dramatic writing for film.
Students develop a concept , create a detailed step-outline and draft and refine an intermediate-length screenplay. Students will receive extensive feedback and critique throughout the writing process.

Prerequisites: Film 7302G or permission of program director.

FILM 7321G Rewriting and Structuring Workshop

60 hours; 3 credits
This course focuses on clarity, economy, visual scenic language and staging, character subtext,
internal/external conflict and development, premise, balance and tone. In order to gain distance on their work, students draft self-critiques of their own work prior to the rewriting process.

Prerequisite: Film 7312G or permission of the program director.

FILM 7322G Advanced Screenwriting 2

60 hours; 3 credits
An intensive workshop course designed to take students through the stages of developing and writing a complete first draft of a feature-length screenplay. In addition to authoring their own work, students will serve as story editor on another student's screenplay.

Prerequisite: Film 7312G or permission of the program director.

FILM 7323G Adaptation for the Screen

60 hours; 3 credits
This course will focus on the process of adapting fiction (short and long), stage plays, true-to-life stories, myth and fairy tale into short and feature-length screenplays. Issues of rights acquisitions will be examined. Classic and contemporary theories of adaptation will also be considered.

Prerequisite: FILM 7312G or permission of the program director.

FILM 7331G Writing and Creating Content for New Media

60 hours; 3 credits
A hands-on intensive course in writing narratives and creating content for emerging new media productions. Students will complete a script

and visual mapping of their story world for an interactive environment.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7332G Advanced Screenwriting 3

60 hours; 3 credits
Building on the work completed in FILM 7322G, students will redraft and polish their feature-length
script. Students will serve as story editor on another student's screenplay.

Prerequisite: Film 7322 or permission of the program director.

FILM 7401G Process of Producing

60 hours; 3 credits
This course covers the various facets of producing, from development of an idea through distribution of a completed movie .

Prerequisite: Matriculation for the M.F.A. in Film or permission of the program director.

FILM 7411G Pre-production

60 hours; 3 credits
Principles and practices of the line producer, production manager and assistant director during preproduction. Topics covered will include: script breakdown, scheduling, budgeting, casting, finding and securing locations and permits, working with unions and insurance companies, hiring crew, and
negotiating cast and crew contracts.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts and permission of the program director.

FILM 7412G Producing Symposium

60 hours; 3 credits
This course offers an opportunity for students to study the work of both industry insiders and mavericks and to meet guest producers who will talk about their approach to producing.

Prerequisite: FILM 7401G or permission of the program director.

FILM 7421G Production and Set Management

60 hours; 3 credits
Theory and practice of the real-world functions of the line producer. Emphasis on the craft, logistics and technical aspects of filmmaking.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts and permission of the program director.

FILM 7422G Producing for New Media

60 hours; 3 credits
In the increasingly complex technologically-driven media environment, learning to produce for new
and emerging media is an essential competency for a producer today. This course offers an in-depth
exploration of topics and issues at the forefront of new media production.

Prerequisite: Matriculation in the M.F.A. in Cinema Arts and permission of the program director.

FILM 7423G Finance for Film and Other Media

60 hours; 3 credits
An essential function of the producer is to recognize, source and capitalize on financing opportunities. Toward that goal, this course provides a comprehensive understanding of how the "money chase" works beginning with a survey of traditional finance structures such as co-productions, tax credits and equity investment and concluding with a hands-on crowd-funding campaign run by students in support of their capstone thesis projects.

Prerequisite: Matriculation in the M.F.A. in Cinema Arts and permission of the program director.

FILM 7431G Distribution and Exhibition

60 hours; 3 credits
An advanced practical and theoretical overview of film distribution, from theatrical to new on-line
platforms. Analysis of the exhibition landscape, from conventional forms to emerging possibilities.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7501G Editing

60 hours; 3 credits
The art and techniques of editing narrative films. Principles of continuity, dramatic emphasis and
clarity, aesthetics and visual style are studied. This is a hands-on workshop where students edit a
variety of scenes. Emphasis is on peer critique.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7502G Sound Editing and Design 1

60 Hours; 3 Credits
Students explore how sound works with visual image as an active and creative partner in storytelling. Sound design provides an aural narrative that is a critical component of filmmaking. Practical approaches to sound editing, Foley, and ADR. Course culminates in a final group sound project.

Prerequisites: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7511G Visual Effects Editing

60 hours; 3 credits
Workshop on post-production visual effects. Preparation and integration of visual effects into finished film sequences. Collaboration strategies for visual effects artists, cinematographers, animators, and post-production supervisors.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the chairperson.

FILM 7512G Sound Editing and Design 2

60 Hours; 3 Credits
Continuation of sound editing and design for cinema arts. Introduces advanced dialogue editing, film
music, and preliminary mixing along with sound effects. Culminates in a final group sound project.

Prerequisite: Film 7501G or permission of program director.

FILM 7513G Editor's Symposium

60 hours; 3 credits
This course is an opportunity for students to study the work of master editors and also to meet guest editors who will talk about their process.

Prerequisite: Matriculation in the M.F.A. in Cinema Arts and permission of the program director.

FILM 7514G Production Sound

60 hours; 3 credits
The fundamentals of sound recording for film and television production. The course will cover acoustics, psychoacoustics, microphones, recorders and other audio equipment, studio and location recording of dialogue, music, and effects. Hands-on use of audio equipment. Students will learn the fundamentals of practical scene analysis from an audio perspective.

FILM 7521G Advanced Editing

60 hours; 3 credits
Advanced workshop in the aesthetics and techniques of editing. Emphasis is on creative storytelling
and technical mastery of narrative structure, including sound design, the use of visual effects, color
correction, media management and deliverables.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7522G Digital Media Integration

60 hours; 3 credits
The theory and practice of digital media integration, including digital cinema capture, formats,
compression, mastering and workflow. Best practices for the use of linear media within interactive and new media applications. This course provides the expertise for working within current digital media environments.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7523G Visual Effects

60 hours; 3 credits
This course provides an overview and introduction to visual effects techniques. The course will
include the terminology, theory, and practice of visual effects, focusing on compositing techniques.
The basics of industry-standard compositing software will be studied and used in the hands-on creation and execution of visual effects shots.

Prerequisite: FILM 7522G or permission of the program director

FILM 7524G Advanced Visual Effects

60 hours; 3 credits
Building on the techniques studied in FILM 7523G this course provides practical, applied knowledge
of advanced compositing and an introduction to CG techniques that are used in the film industry.
Includes the terminology, theory, and practice of 3D computer graphic and advanced compositing
techniques.

Prerequisite: FILM 7522G, FILM 7523G, or permission of the program director

FILM 7531G Post-Production Supervision

60 hours; 3 credits
Creative and strategic approaches to the post-production process, including scheduling and budgeting, overseeing cuts and test screenings, finishing and deliverables. An emphasis on collaboration through effective management of all post-production personnel and elements including sound design, music, titles, and visual effects.

Prerequisite: Matriculation for the M.F.A. in Cinema Arts or permission of the program director.

FILM 7532G New Media Design

60 hours; 3 credits
New media design environment for media producers working in the cinema industry. Examination of how sound and image productions such as motion pictures, video games, and content for the Internet and mobile devices, are produced and distributed across multiple platforms.

Prerequisite: Matriculation for the M.F.A. in film or permission of the program director.

FILM 7801G Production Workshop 1

60 hours; 3 credits
A hands-on production workshop centered around the creation of short films by crews made up of a
writer, director, cinematographer, producer, set designer, editor and sound designer working in
collaboration.

Prerequisite: Matriculation for the M.F.A. in Cinema Production and permission of the program director.

FILM 7811G Production Workshop 2: Post-Production

60 hours; 3 credits
A hands-on course that teaches the fundamentals of post-production. Students learn the art and
techniques of picture editing and all other aspects of post-production, including sound and music
editing, and managing the post-production workflow. (Not required for Post-Production students)

Prerequisite: FILM 7801G

FILM 7821G Production Workshop 3

60 hours; 3 credits
A hands-on production workshop. Students of varied specializations collaborate in production teams to produce short documentaries. Each student team produces two documentaries over the course of the semester.

Prerequisite: FILM 7811G (except Post Production students)

FILM 7831G Production Workshop 4

60 hours; 3 credits
An intensive hands-on production workshop in which students work collaboratively to produce a
studio-based narrative film, based on their area of specialization.

Prerequisite: FILM 7821G

FILM 7942G Thesis Project Development

60 hours, 3 credits
Working both collaboratively and in their areas of specialization—Producing, Directing, Screenwriting, Cinematography, Post-Production—this course provides an opportunity for students to source, write, re–write, develop and prepare materials for their thesis projects. Each group will work under the supervision of faculty specialists to undertake a thorough preparation and seek to gain approval of their capstone projects.

Prerequisite: Matriculation in the M.F.A. in Cinema Arts and permission

of the program director.

FILM 7951G Thesis Project 1: Production

FILM 7951G Thesis Project 1: Production
Production students will each be expected to play key creative roles in producing a 15-20 minute
narrative film, based on their specialization. The project should evidence a firm grasp of the craft, and
the ability to create a work of originality and imagination. In addition, all production students will be
expected to work in a collaborative manner on each other's projects, rotating through the various
positions, according to their specialized discipline.

Prerequisite: FILM 7942G

FILM 7952G Thesis 1: Screenwriting

60 hours; 3 credits
The first half of a two-semester M.F.A. capstone sequence in which students complete the first drafts of two feature-length screenplays, one of which must be an original script; the second may be an adaptation from an existing work.

Prerequisite: FILM 7942G

FILM 7953G Thesis Project 1: Post-Production

60 hours, 3 credits
Under the mentorship of production professors, students in the Post-Production track will each be
expected to prep and begin the first stages of editing on a 15-20 minute narrative film. The project
should evidence a firm grasp of the craft and the ability to create a work of originality and imagination.
Post-production students will also work on set in the sound department on Thesis productions.

Prerequisite: FILM 7942G

FILM 7961G Thesis Project 2: Production

60 hours, 3 Credits
Students in the production tracks will complete post-production requirements on the films shot during
the previous semester in FILM 7951G. All production students are expected to work collaboratively on
their projects with an emphasis on their specialized discipline.

Prerequisite: FILM 7951G

FILM 7962G Thesis 2: Screenwriting

120 hours; 6 credits
The second half of a two-semester M.F.A. capstone sequence in which students redraft and polish their two feature-length scripts in preparation for staged readings at the culmination of the semester.

Prerequisite: FILM 7961G

FILM 7963G Thesis Project 2: Post-Production

120 hours, 6 Credits
Under the mentorship of production professors, Post-Production students will complete post-production for the films shot during the previous semester in FILM 7953G. The project should evidence a firm grasp of the craft and the ability to create a work of originality and imagination. All production students will be expected to work in a collaborative manner on their projects, with an emphasis on their specialized discipline.

Prerequisite: FILM 7953G

FILM 7964G Portfolio Development: Ready for the Biz

60 hours; 3 credits
This course provides students with the opportunity to develop important assets needed to enter the film industry, including a compelling show-reel, website, and resume. Through presentations by industry professionals, students will also develop a familiarity with the structure and function of the film industry in New York and Hollywood, both the studio system and the world of indie film production.

Prerequisite: FILM 7951G, FILM 7952G, or FILM 7953G

Finance

Department office: 218 Whitehead Hall
Phone: 718.951.5154

Full-time Faculty

Professor: Mohanty
Associate Professors: Lin, Park
Assistant Professors: Baek, Glambosky, Peterburgsky

Courses

FINC 7215X Money and Capital Markets

30 hours plus conference; 3 credits
Sources and uses of funds in financial markets. Market structure of interest rates. Flow of funds analysis. This course is the same as Economics 7215X [711X] and [Business 7215X].

Prerequisite: undergraduate course in macroeconomics.

FINC 7216X Managerial Finance

30 hours plus conference; 3 credits
Drawing upon current managerial finance theory and practice, this course develops students' ability to apply the techniques of financial analysis and financial modeling to make business decisions from the perspective of a chief financial officer. Topics covered include: agency theory, managerial finance functions, financial statements analysis, cash flow management, financial planning and control, financial institutions and markets, time value of money, interest rates, financial assets valuation, risk analysis, capital budgeting, choice of capital structure, dividend policy, working capital management, and long-term financing. (Not open to students who have completed [Business 7216X]).

Prerequisite: One undergraduate course in accounting and one undergraduate course in corporate finance or equivalent.

FINC 7240X Global Finance and Management

30 hours plus conference; 3 credits
Environment of financial management: The international monetary system, international capital, foreign exchange parity relations, foreign exchange determination. International investing: Foreign exchange risk management and multinational working capital management. Foreign investment analysis: international portfolio investment, corporate strategy and foreign direct investment. Assessment and management of international taxation and political risk. (Not open to students who have completed [Business 7240X]).

Prerequisite: one undergraduate course in macroeconomics and one undergraduate course in statistics.

General Science

Department office: 2606 James Hall
Phone: 718.951.5061

Courses

GSCI 7000T General Science in Childhood and Middle Childhood Education
45 hours plus conference; 3 credits
Content and materials used in science instruction in childhood and middle childhood education. Survey of basic sciences, including methods of inquiry, demonstrations, preparation of individual projects applicable to science education.

Prerequisite: permission of the general science coordinator.

GSCI 7010T Selected Concepts in Physical Science for Childhood and Middle Childhood Teachers
45 hours plus conference; 3 credits
Matter and energy and their interrelationship. Development of the concepts of force, electricity, magnetism, heat and energy. Application to explanation of phenomena appropriate for elementary and middle school topics. Addresses content and pedagogy. Field trips may be required.

Prerequisite: permission of the general science coordinator.

GSCI 7011T Space, Time and Motion: Physical Science

45 hours asynchronous online instruction; 3 credits
Major discoveries of ancient Greek philosophers on to Galileo Galilei, Newton and Einstein. Properties of motion, time, space, matter, and energy. Special Theory of Relativity, photon hypothesis, wave-particle duality, General Theory of Relativity and its implications for astrophysics and cosmology, quest for unified field theory. Einstein as a social and political figure. Implications of technology for society, energy production in stars, black holes, the Big Bang. Role of the scientist in modern society. Links content and pedagogy. Offered in collaboration with the American Museum of Natural History Seminars on Science. Asynchronous online.

GSCI 7014T The Solar System

45 hours asynchronous online instruction; 3 credits
Solar System: components, origins and evolution. Current space missions, profiles of space scientists, experimental techniques applicable to the investigation of celestial bodies. The Sun, nuclear fusion, energy, gravity and electromagnetism, conditions and processes that shaped the early Universe. Examination of the rocky and gaseous bodies that orbit the Sun. Terrestrial and extra-terrestrial atmospheres and magnetospheres. Classification of planets, comets, asteroids and other objects in space. Search for extra-solar star systems and life. Offered in collaboration with the American Museum of Natural History Seminars on Science. Asynchronous online. (Not open to students who have taken Geology 7012T [612].)

GSCI 7030T Selected Concepts in Life Science for Childhood and Middle Childhood Teachers
45 hours plus conference; 3 credits
Selected concepts in life science; adaptations, characteristics and life cycles of plants and animals, microorganisms, habitats, ecosystems, and environments. Methods of inquiry in life science. Addresses content and pedagogy. Field trips will be required.

Prerequisite: permission of the general science coordinator.

GSCI 7031T Field Studies in Life Science for Childhood and Middle Childhood Teachers
60 hours supervised field work; 3 credits
Place-based field study of selected concepts in Life Science: emphasis on populations, community interactions, evolution, taxonomy, ecosystems and biomes, biogeochemical cycles. Methods of inquiry in field biology. Addresses content and pedagogy. May be repeated for credit with permission.

Prerequisite: permission of the general science coordinator.

GSCI 7033T Diversity of Fishes: Classification, Anatomy, and Morphology
45 hours asynchronous online instruction; 3 credits
Inquiry-based examination of the diversity, evolution, ecosystems, and biogeography of fish. Cladistics, and species characteristics. Analysis of digitized specimens from the American Museum of Natural History Ichthyology Department Collections. Links content and pedagogy. Offered in collaboration with the American Museum of Natural History Seminars on Science. Asynchronous online.

GSCI 7034T Link Between the Dinosaurs and Birds

45 hours asynchronous online instruction; 3 credits
Fossil and behavioral evidence linking dinosaurs to modern birds; evolutionary relationships; comparative anatomy, cladistics; geologic time, extinction. Asynchronous online instruction. Links content and pedagogy. Offered in collaboration with the American Museum of Natural History Seminars on Science. Asynchronous online.

GSCI 7035T Evolution

45 hours asynchronous online instruction; 3 credits
Investigation of evolution through lens of paleontology, geology, systematics, embryology and molecular biology. Major evidence for and mechanisms of evolution. Applications in the life sciences; medicine, public health, agriculture and conservation. Observation of patterns in nature; evolutionary relationships among all species; origin and evolution of humans. Links content and pedagogy. Offered in collaboration with the American Museum of Natural History Seminars on Science. Asynchronous online.

GSCI 7036T Genetics, Genomics, Genethics -- Molecular Biology for Middle Childhood and Adolescence Educators
45 hours asynchronous online instruction; 3 credits
Foundations of genetics and mechanisms of transmission of hereditary characteristics; genomics (the study of genomes); virtual exploration of molecular lab techniques, sequencing of the human genome; evolutionary theory, role of genetic diversity; medical advances. Social, ethical, and legal implications of genetically modified organisms, cloning for therapeutic and reproductive purposes, genetic enhancement of humans, and the ownership of genetic information. Links content and pedagogy in middle childhood and adolescence education. Offered in

collaboration with the American Museum of Natural History Seminars on Science. Asynchronous online.

GSCI 7037T Sharks and Rays - Ecology, Classification, and Evolution
45 hours asynchronous online instruction; 3 credits
Basic biology, ecology, diversity, and evolution of sharks and rays (the elasmobranches). Examination of conservation issues, methods of study, adaptations for survival, reproduction, and predatory behaviors using online access to museum collections, the fossil record, and research. Links content and pedagogy. Offered in collaboration with the American Museum of Natural History Seminars on Science. Asynchronous online.

GSCI 7040T Selected Concepts in Earth Science for Childhood and Middle Childhood Teachers
45 hours plus conference; 3 credits
Selected concepts in Earth Science: spaces systems, geologic systems, atmospheric systems, and water systems. Addresses content and pedagogy. Methods of inquiry in Earth science. Field trips will be required.

Prerequisite: permission of the general science coordinator.

GSCI 7041T Field Studies in Earth Science for Childhood and Middle Childhood Teachers
60 hours supervised fieldwork; 3 credits
Place-based field study of selected concepts in Earth Science: emphasis on geologic systems; processes of mineral and rock formation, characteristics of minerals and rocks, methods of identification and classification, structure of the earth, surface forces, crustal movements, erosional-depositional processes, landscape development, geologic history, interaction between landscape and atmospheric and water systems. Methods of inquiry in field geology. Addresses content and pedagogy. May be repeated for credit with permission.

Prerequisite: permission of the general science coordinator.

GSCI 7042T Earth Inside and Out

45 hours asynchronous online instruction hours; 3 credits
Investigation of five guiding questions regarding Earth systems: How do geologists "read" the rocks? What causes climate and climate change? How has the Earth evolved? Why are there ocean basins, mountains, and continents? Why is the Earth habitable? Links content and pedagogy. Offered in collaboration with the American Museum of Natural History Seminars on Science. Asynchronous online. Field trips may be required.

GSCI 7050T Selected Concepts in Environmental Science for Childhood and Middle Childhood Teachers
45 hours plus conference; 3 credits
Air and water pollution, solid waste, and natural resources. Scientific and technological material related to the environment. Methods of inquiry in environmental science. Addresses content and pedagogy. Field trips will be required.

Prerequisite: permission of the general science coordinator.

GSCI 7054T The Ocean System

45 hours asynchronous online instruction; 3 credits
The ocean system. Interaction between the atmosphere, hydrosphere, geosphere and biosphere. Properties of the water molecule; action of waves, wind, and density variations; deep-sea and surface currents and implications for Earth's climate and local weather. Influence of symbiotic relationships and biological adaptations on ocean dynamics. Characteristics of marine organisms. Origin and diversification of life across a variety of ecosystems. Ocean habitats: coral reefs, mangrove forests, tidal zones and deep-sea hydrothermal vents. Profiles of oceanographers and emerging technologies such as ocean-going robots and core-drilling. Offered in collaboration with the American Museum of Natural History Seminars on Science. Asynchronous online.

Health and Nutrition Sciences

Department office: 4123 Ingersoll Hall
Phone: 718.951.5026

Full-time Faculty

Professors: Axen, Balk, Greene, Levin, Mirotznik, Oppenheimer
Associate Professors: Eastwood, Grassman, Greenberg, Grommet, Grov, Schnoll, Weston
Assistant Professors: Chu, Fuster, Haley, Jiang, Koizumi, Masterjohn, Shen
Lecturer: Khalfin

The Department of Health and Nutrition Sciences provides premier, thoughtfully created programs in which students learn to help people maintain and recover good health in all contexts: locally, globally, geographically, culturally, socially, and emotionally. Innovative programs and cutting-edge knowledge place the department in the vanguard of educators at the university level. All programs prepare students for significant careers in their chosen field. Students choose from courses in a large range of topics in health and nutrition, from birth to old age. With the understanding that in the digital age information about health and nutrition is being developed and disseminated faster than ever before, all programs offer a framework in which to appraise and assess facts and theories and apply them for the benefit of all people.

M.A. degree program in community health
HEGIS code 1214; SED program code 78495

The master of arts degree in community health serves both national and international students who are pursuing a career in health promotion/disease prevention. Many of our graduate students are in practice in the field and come to Brooklyn College for advanced training and professional development.

The program has two concentrations: community health education and thanatology. The community health education concentration develops professionals who design, conduct, and evaluate activities that help improve the health of individuals and communities. Graduates typically find employment in public health departments, community-based organizations, hospitals, and clinics as patient educators, health coaches, community organizers, public health educators, and health program managers.

The thanatology concentration focuses on the development of expertise in the area of dying, death, and bereavement. Graduates hold a variety of positions including that of hospice program director, hospital bereavement coordinator, hospice volunteer coordinator, funeral aftercare counselor, and bereavement counseling program director.

Matriculation requirements

Applicants must offer at least 18 credits in acceptable health-related courses at the undergraduate or graduate level and a minimum GPA of 3.0. Experience in a health-related field is required for the thanatology concentration. One year of relevant experience in the field may be accepted in place of up to 18 credits for students in the community health education concentration.

Degree requirements

Thirty-three to thirty-six credits are required for the degree. Students must complete one of the following two concentrations of study: Community Health Education (36 credits) or Thanatology (33 credits).

Community health education concentration

Required courses (33 credits): Health and Nutrition Sciences 7110X, 7120X, 7140X, 7141X, 7150X, 7163X, 7170X, 7171X, 7925X, and 7930X.
Elective courses: 3 credits

Thanatology concentration.

Required courses (27 credits): students must complete 24 credits from the following courses: Health and Nutrition Sciences 7180X, 7181X, 7182X, 7183X, 7184X, 7185X, 7186X, 7187X, 7188X, 7901X.
Students must also complete Health and Nutrition Sciences 7930X (3 credits) and elect one of the exit requirements (see below), either of which

requires two courses (6 credits) for a total of 33 required credits in this concentration.

Students with advanced preparation may substitute other courses for required courses with the permission of the deputy chairperson.

As part of the selected required concentrations ("Community Health Education" or "Thanatology"), students have the option of completing a specialization in Maternal, Child, Reproductive, and Sexual Health (MCRSH) by taking 9 of their 36 or 33 degree credits in courses designated as MCRSH, completing their fieldwork placement (HNSC 7925X or HNSC 7901X) in a MCRSH-related project, and (if applicable) writing their master's paper (HNSC 7940X, HNSC 7950X) or master's thesis (HNSC 7935X, HNSC 7999X) on a MCRSH-related topic. Six of the 9 credits of MCRSH coursework must consist of HNSC 7300X and HNSC 7310X. All MCRSH coursework and requirements are subject to approval by the deputy chairperson. MA students wishing to pursue the MCRSH specialization should notify the deputy chairperson in writing within their first two semesters of coursework.

Exit requirements:

Students matriculated in the community health education concentration are required to submit an acceptable capstone project at the culmination of HNSC 7925X.

Students matriculated in the thanatology concentration are required to submit either an acceptable thesis or an acceptable master's paper.

Students in either concentration electing to submit a thesis must complete Health and Nutrition Sciences 7935X (3 credits) and 7999X (3 credits). Information about the thesis is in the section "Academic Regulations and Procedures" of the Graduate Bulletin.

Students in the thanotology concentration electing to submit a master's paper must complete Health and Nutrition Sciences 7940X (3 credits) and 7950X (3 credits) with a grade of B or better. The student is not allowed to take 7940X more than twice. The grade for Health and Nutrition Sciences 7950X will be the same as the grade for the master's paper. The student must earn a grade of B or better for a master's paper to be acceptable.

Note that Health and Nutrition Sciences 7930X is a prerequisite for Health and Nutrition Sciences 7935X and for Health and Nutrition Sciences 7940X.

Courses in the Health and Nutrition Sciences Department offered toward the degree must be 7000-level courses.

Community Health Education students interested in national certification as a Certified Health Education Specialist (CHES) may take the examination administered by the National Commission for Health Education Credentialing, Inc.

M.P.H. degree program in community health
HEGIS code 1214; SED program code 21578

This program, accredited by the Council on Education for Public Health, provides graduate-level training for students interested in pursuing or in advancing careers in public health. Successful applicants to the M.P.H. program include health professionals and recent college graduates. The program offers two concentrations, a general public health track and a more specialized health care policy and administration track. The degree offers classroom, online, and internship experiences and provides the opportunity for students to work closely with a faculty mentor. By offering all classes in the evenings in Brooklyn and Manhattan, the program is geared to the needs of working adults. Graduates of the program are employed as managers, administrators, researchers, and planners in hospitals, not-for-profit agencies, community programs, departments of health, and state and national health organizations.

Matriculation requirements

Applicants must offer at least 18 undergraduate credits in acceptable health-related courses and a GPA of at least 3.00. One year of relevant experience in the field may be accepted in place of 18 credits. Applicants should have experience in a health-related field and must submit a resume together with a statement of academic interests and goals. Applicants also must submit results of the Graduate Record Examination. A waiver of the GRE may be made when a student has a master's degree or higher from an accredited US college or university. General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Forty-five credits are required for the MPH degree.

Students must complete Health and Nutrition Sciences 7110X, 7120X, 7130X, 7140X, 7150X, 7920X and 7930X.

Students must receive a grade of at least B in each of these seven core courses; courses may be repeated if necessary.

In addition, students must complete one of the following two concentrations of study:

General public health concentration:
Students in this concentration must take Health and Nutrition Sciences 7163X, 7164X and 7171X. Students must choose their remaining courses

from courses numbered Health and Nutrition Sciences 7000X and above unless they receive permission from the deputy chairperson to substitute a specific course. In addition, students must submit either a thesis or a capstone project. Students electing to submit a thesis must complete Health and Nutrition Sciences 7935X and 7999X. Information about the thesis is in the section "Academic Regulations and Procedures." Students electing to complete a capstone project must complete Health and Nutrition Sciences 7950X with a grade of B or better.

Health care policy and administration concentration:
Students must take the following courses: Health and Nutrition Sciences 7141X, 7142X, 7143X, 7144X. Students must choose their remaining courses from courses numbered Health and Nutrition Sciences 7000X and above unless they receive permission from the deputy chairperson to substitute a specific course. In addition, students must submit either a thesis or a capstone project. Students electing to submit a thesis must complete Health and Nutrition Sciences 7935X and 7999X. Information about the thesis is in the section "Academic Regulations and Procedures." Students electing to complete a capstone project must complete Health and Nutrition Sciences 7950X with a grade of B or better.

As part of the selected required concentration ("General Public Health" or "Health Care Policy and Administration") students have the option of completing a specialization in Maternal, Child, Reproductive, and Sexual Health (MCRSH) by taking 9 of their 45 degree credits in courses designated as MCRSH, competing their fieldwork placement (HNSC 7920X) in a MCRSH-related project, and writing their capstone project (HNSC 7950X) or master's thesis (HNSC 7935X, HNSC 7999X) on a MCRSH-related topic. Six of the 9 credits of MCRSH coursework must consist of HNSC 7300X and HNSC 7310X. All MCRSH coursework and requirements are subject to approval by the deputy chairperson. MPH students wishing to pursue the MCRSH specialization should notify the deputy chairperson in writing prior to registering for their first semester's courses.

Furthermore, all MPH students must independently complete a professional portfolio. The portfolio describes relevant public health experiences and achievements during the course of students' studies leading to the MPH degree. The portfolio consists of academic, professional and service accomplishments and may include major course projects, reports, presentations, publications and other samples of work that is completed.

M.S. degree program in nutrition
HEGIS code 1306; SED program code 86173

The master of science degree in nutrition provides advanced-level study of nutritional science and clinical nutrition. The program addresses the academic interests of individuals who wish to become nutrition educators, administrators of programs that provide nutritional services, nutritionists in community centers or private practice, researchers, or interpreters of research for the public.

The M.S. program by itself does not lead to the credentials of Registered Dietitian Nutritionist (RDN) or New York State Certified Dietitian/Nutritionist (CDN). Students interested in obtaining these credentials may use a number of the courses in the M.S. program, as well as the courses that are prerequisites to the program, toward meeting the requirements of an ACEND accredited Didactic Program in Dietetics (DPD). Admission to the Brooklyn College, graduate level Dietetic Internship is by separate application and is not guaranteed by acceptance to the M.S. program.

Prerequisites for application to the M.S. program can be met by students whose baccalaureate degrees are in fields other than nutrition by taking specified courses. Please contact the graduate deputy chairperson for advisement on prerequisites for the MS program, and the DPD director for advisement concerning the DPD and Dietetic Internship.

Matriculation requirements

Applicants must offer undergraduate or graduate courses in general biology, physiology, general chemistry, organic chemistry, nutrition, biochemistry or nutritional chemistry, statistics, and medical nutrition therapy.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission".

Degree requirements

Thirty to 33 credits are required for the degree.

Students must complete the following required core courses:
Health and Nutrition Sciences 7230X, 7210X, 7211X, 7213X, 7241X, and 7931X. Students must receive a grade of at least B in each of these courses or approval of the Graduate Deputy Chairperson for Nutrition in order to qualify for the comprehensive examination or thesis; courses may be repeated if necessary.

A minimum of 12 additional credits is required. Students may choose among the following courses: Health and Nutrition Sciences 7120X, 7183X, 7200X, 7201X, 7212X, 7221X, 7231X, 7232X, 7233X, 7234X, 7240X, 7935X.

Students interested in the Dietetic Internship (DI) accredited by the Academy of Nutrition and Dietetics must take Health and Nutrition Sciences 7213X, 7240X, 7241X, and one additional graduate course in nutrition before beginning the DI. The DI consists of Health and Nutrition Sciences 7200X, 7201X, 7202X, and 7203X. Separate applications must be made to the DI and to the M.S. program in nutrition.

Students must pass a comprehensive examination or submit a thesis acceptable to the department. Students who choose to write a thesis must complete Health and Nutrition Sciences 7999X. Information about the requirements for the comprehensive examination and thesis is in the section "Academic Regulations and Procedures."

Dietetic Internships (DI)

The Academy of Nutrition and Dietetics accredited Dietetic Internship (DI) at Brooklyn College is a two semester program that provides the supervised practice experience required to sit for the Registered Dietitian (R.D.) examination. Students must be enrolled in the M.S. in nutrition program to be eligible for the DI, and they must file a separate application for the DI. Email diprog@brooklyn.cuny.edu for details. The program enables students to apply theory and research to practice in clinical, community, and food service settings, thereby enriching their education and preparing them to make significant contributions to and rapid advancement in the profession.

Advanced certificate program in grief counseling
HEGIS code 2104.10; SED program code 30468

The advanced certificate in grief counseling presents foundational and advanced knowledge in the areas of bereavement, traumatic grief, and thanatological counseling. The program is designed to provide grief counseling training for individuals who have completed a baccalaureate degree and are working with, or interested in working with, the dying and the bereaved or for individuals who have completed a master's degree and are seeking further training. In addition, the program will allow practitioners to meet professional continuing education requirements to maintain existing licenses or certifications. The program is designed to conform to the Association for Death Education and Counseling (ADEC) certification requirements for those persons interested in becoming certified or maintaining their certification in Thanatology: Death, Dying, and Bereavement.

Course description

Brooklyn College students matriculated in related graduate degree programs may be admitted to the Advanced Certificate and earn both their graduate degree and the certificate, applying 12 credits to both programs of study.

Matriculation requirements

This graduate certificate program provides grief counseling training for individuals who work with or who would like to work with the dying and the bereaved. It is designed to accommodate those who have completed a baccalaureate or a master's degree as well as for practitioners who must meet professional continuing education requirements to maintain existing licenses or certifications. The program adheres to the Association for Death Education and Counseling (ADEC) certification requirements for persons interested in becoming certified or maintaining certification in Thanatology: Death, Dying, and Bereavement.

Applicants must present a baccalaureate degree with at least a 3.00 GPA in the major and a minimum 2.85 overall GPA in 18 credits of acceptable health- or thanatology-related courses; courses in health and nutrition sciences, philosophy, psychology, sociology, biology, anthropology, chaplaincy, and counseling may meet this 18 credit matriculation requirement. Students matriculated in related graduate programs at Brooklyn College may be admitted and earn this advanced certificate in addition to the graduate degree they are pursuing. Professional development courses offered by recognized associations may also be used to meet the requirement for health- or thanatology-related coursework. Applicants must have experience in a related field.

Certificate requirements

Eighteen credits are required for the advanced certificate. Students must maintain a minimum grade point average of 3.00. No more than two courses with a grade below B may be offered toward the completion of the certification requirements.

Students must complete Health and Nutrition Sciences 7187X, 7180X, 7185X. The remaining 9 credits are elective courses chosen in consultation with the program director from the following: Health and Nutrition Sciences 7181X, 7188X, 7182X, 7183X, 7184X, 7186X, 7901X. Other elective graduate courses may be substituted with the approval of the program director.

All courses within the advanced certificate program are currently offered as part of the Brooklyn College Master of Arts in Community Health as well. Credits earned toward the certificate are applied to the master's degree for those certificate students who successfully apply to the master's program. In turn, master's students in related degree programs at Brooklyn College can obtain the advanced certificate in grief counseling.

Courses

To register for courses numbered 7000 and higher, students who offer fewer than 18 undergraduate credits in health and nutrition sciences must have permission of the deputy chairperson before registration.

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

Seminars

HNSC 7930X Research Seminar

45 hours; 3 credits
Examination of the stages of the research process, highlighting selected research designs and data collection techniques. Application of the principles and methods of research to the critical analysis of the health and nutrition sciences literature.

Masters of Public Health core courses

HNSC 7100X Proseminar in Public Health

45 hours; 3 credits
Introduction to the field of public health through an examination of its theories, principles, methods, and history. Overview of national and international health and health services. Introduction to public health resources and written presentation of critical analysis. The professional discipline of public health. Ethical issues in public health.

Prerequisite: Acceptance into the MPH program.

HNSC 7110X Fundamentals of Social and Behavioral Health

45 hours; 3 credits
This course provides a topical and theoretical survey of social and behavioral issues in public health

HNSC 7120X Fundamentals of Epidemiology

45 hours; 3 credits
Apply principles and methods of epidemiological analysis. Identify and interpret epidemiological data.
Illustrate and investigate incidence, distribution, determinants, and control of disease.

HNSC 7130X Fundamentals of Environmental Health

45 hours; 3 credits
Survey of chemical, physical and biological factors influencing quality of ambient, workplace and
home environments. Topics include: air and water pollution; radiation; hazardous substances; solid
wastes; food protection; and natural and human-made disasters.

HNSC 7131X Occupational Health in the Health Care Industry

45 hours; 3 credits
Demographics of health care workers. Common physical, chemical, biological, and psychosocial hazards in the health care environment and their effects. Nature of occupational injuries and illnesses. Control and regulation of workplace hazards. Regulatory agencies.

HNSC 7140X Fundamentals of Health Policy and Management

45 hours; 3 credits
Examination of the organization, delivery and financing of health care in the United States as it pertains to the health policy-making process, including the organization of the agencies and personnel
constituting the health care system, and analysis of government structure, laws, and regulations.
Theoretical concepts, practice, and implementation of health programs in organized settings, including
the planning, administration, management, evaluation, and policy analysis of public health agencies
and private sector managed care.

HNSC 7141X Planning, Strategic Analysis, and Organizing of Health Care Services

45 hours; 3 credits
Dilemmas resulting from the practice of the health sciences including clinical care, public health practice, human subjects research, and the delivery of health services and the development of health policies. Conflicting needs and values of the practioners, clients, health care system, and communities. Critical evaluation of proposed solutions offered by the professions, government, communities. Case study evaluations. Examination of historic and contemporary cases.

Prerequisite: Health and Nutrition Sciences 7140X [770X]

HNSC 7142X Health Policy and Administration in Public Health

45 hours; 3 credits
Study of public health policy and its impact on health care service organization, administration, and delivery. Study of public policies that drive health care organization and delivery. Examples of special topics in public health policy such as Medicare and Medicaid development and changes. Administrative responses to policy shifts. Increasing complexity and frequent changes in law and regulation change how health care services are defined and delivered.

Prerequisite: Health and Nutrition Sciences 7140X [770X] or its equivalent.

HNSC 7143X Health Care Financial Management

45 hours; 3 credits
Study of the basic principles of health-care accounting. Analysis of health-care financial statements and responsibility-accounting techniques. Evaluation of methods of managing working capital, budgeting, using cost information in decision making, controlling costs, and financing capital projects in the health-care setting. Analysis of approaches to pricing, rate setting, and cost control in the health-care reimbursement environment.

HNSC 7144X Health Economics

30 hours plus conference; 3 credits
Economic analysis of the structure, performance, and government policy in the health care sector of the economy. Demand and supply of health care services, the role of third party payers, and the public policy debate over government reform of the health care system. Microeconomic, econometric, and political philosophy concepts relevant to issues of justice in health care. This course is the same as Economics 7060X [772X].

HNSC 7145X Human Resources Management in Health Care

45 hours; 3 credits
Theoretical analysis of techniques for leadership and motivation of professional and nonprofessional health care employees. Study of methods for managing work groups and minimizing conflict in health care institutions. Examination of health personnel management. Evaluation of employee communications in health care. Analysis of workplace negotiation, with special reference to health care labor negotiations.

Prerequisite: a course in health care management or appropriate employment in health care management.

HNSC 7146X Law and Public Health

45 hours; 3 credits
An analysis of public health policy and legal thinking in the context of the U.S. legal system, and the roles of the branches of government in creating, administering, and enforcing the health laws. Examination of basic health law concepts and practices in the health industry. Concepts of institutional and individual responsibility. The focus is upon such areas as legal reasoning, sources of health laws, regulations, legal rights to health, standards, licensure, malpractice, and litigation.

HNSC 7150X Fundamentals of Biostatistics

30 hours lecture, 30 hours laboratory, plus conference; 3 credits
Application and interpretation of basic descriptive and inferential statistical methods for the analysis of public health and other health-related data.

HNSC 7151X Biostatistics in Health and Nutrition Sciences II

30 hours lecture, 30 hours laboratory, plus conference; 4 credits
Application of evaluation techniques for community health and nutrition professionals. Design of tools to evaluate health and nutritional status, knowledge, attitudes, and behavior for individuals and populations. Multivariate techniques for assessment of health data including survival analysis, multiple regression, multivariate analysis of variance, discriminant analysis, logistic regression, and factor analysis. Use of computer programs to analyze and interpret health and nutrition data with these techniques.

Prerequisite: Health and Nutrition Sciences 7150X [778.1X] or permission of the chairperson.

HNSC 7163X Conducting Community Needs and Strengths Assessments

45 hours; 3 credits
Introduction to community needs and strengths assessments. Identification, gathering, synthesis and presentation of population (neighborhood) specific data related to a public health issue or condition using technologically appropriate presentations. Analysis of multiple data sources including: U.S., Census, State, county, and neighborhood quantitative data as well as key informant interviews and focus groups.

Prerequisite: 9 credits of core courses in MPH or MA Community Health Education.

HNSC 7164X Health Services Development and Implementation in Community and Public Health

45 hours; 3 credits
Planning, developing and implementing public health and personal health services and relationship to population health. Examination of health planning in the United States and New York State from historical and contemporaneous perspectives. Public policy agenda shaping health services; and local activity derivation from national agenda. Implementation and operating among policy and resource constraints.

Prerequisites: 9 credits of core courses in MPH or MA Community Health Education.

Community Health Education courses

HNSC 7170X Foundations of Community Health Education

45 hours; 3 credits
Introduction to the community health education profession. Expectations of a professional, professional development, and overall mission of public health. Discussion of the theoretical basis for the community health education profession. Introduction to a community health education program planning and evaluation model.

HNSC 7171X Program Evaluation in Community Health

45 hours plus conference; 3 credits
Development and application of program evaluation methods applicable in a range of community health and public health settings. Critique of existing community health education and other health programs for promoting critical thinking and analytic skills.

Prerequisite: Health and Nutrition Sciences 7170X [758X] or Health and Nutrition Sciences 7110X.

Thanatology courses

HNSC 7180X Bereavement

45 hours; 3 credits
Theoretical concepts of grief and bereavement. The impact of mourning on the bereavement process. Health implications of incomplete mourning and pathological bereavement. The role of the health care professional and related personnel in providing care. Research to improve care.

HNSC 7181X Children and Death

45 hours; 3 credits
The child's concept of death. Typical childhood coping patterns in response to death of self, family member, friend. Needs of the terminally ill child, the family, and the caregiver. Alternative care settings. Available resources and supports for the health professional.

HNSC 7182X Health Crisis Intervention

45 hours; 3 credits
Relationships among health, emotion, destructive behavior. Development of sensitivity to behavior patterns leading to destructive acts. Role of the health professional in understanding crisis situations. Agencies designed to assist in health crises.

Prerequisite: Health and Nutrition Sciences 7183X [762X] or a course in health counseling.

HNSC 7183X Health Counseling

45 hours; 3 credits
Application of principles and methods of counseling to health problems. Case studies, identification of problems, techniques of interviewing.

Prerequisite: A course in personal and community health.

HNSC 7184X Bioethics: Health and Medical Dilemmas

45 hours; 3 credits
Dilemmas resulting from the practice of the health sciences including clinical care, public health practice, human subjects research, and the delivery of health services and the development of health policies. Conflicting needs and values of the practitioners, clients, health care system, and communities. Critical evaluation of proposed solutions offered by the professions, government, communities. Case study evaluations. Examination of historic and contemporary cases.

HNSC 7185X The Health Care Provider and Thanatological Counseling

45 hours; 3 credits
Theory and practice of counseling the dying patient and the bereaved. Focus on personal skill development in anticipatory bereavement and postmortem bereavement counseling. Examination of group support, self-help, and individual intervention strategies. Research and evaluation of support programs and techniques.

HNSC 7186X Principles in the Care of the Terminally Ill

45 hours; 3 credits

Needs of the dying patient and family. Clinical approaches to care of terminally ill patients and their families. Role of the hospice as an alternative-care setting. Techniques of pain management and palliative care. The role of the health care professional and related personnel in providing care.

HNSC 7187X Trauma and Traumatic Grief

45 hours; 3 credits
A study of trauma and traumatic grief. Evaluation of assessment tools, treatment modalities, and programs of prevention. Identification of the factors influencing the quality of care provided to a traumatized griever. Critique of trauma research study designs and findings.

HNSC 7188X Adolescents, Death, and Bereavement

45 hours; 3 credits
Encounters with death and bereavement during adolescence. Developmental tasks and transitions during adolescence as foundation for understanding adolescent encounters with death and bereavement. Interventions with terminally ill adolescents. Interventions with bereaved adolescents. Preventive interventions. Assessment of interventions.

Health teacher courses

HNSC 7190X The Family and Personality Development

45 hours; 3 credits
Influence of the family on the individual. Personality development and family interrelationships. Consideration of major problems of adjustment in each phase of the family life cycle. Fall term.

Prerequisite: a course in family relationships.

HNSC 7192X Problems of Drugs in Contemporary Society

45 hours; 3 credits
Drug traffic. Community cooperation in preventing and treating drug abuse. Legal factors and crime relationships; physiological, psychological, sociological aspects of drug abuse. Guidelines for drug abuse prevention and programs. Resources to support such programs in schools and communities. Field trips.

HNSC 7194X Alcohol, Alcoholism, and Health

45 hours; 3 credits
Examination of the effects of alcoholism on the United States health care system; the effects of alcohol on individual and community health. An analysis of etiology, treatment, and rehabilitation models. Issues with regard to prevention strategies and the influence of laws on alcohol abuse.

Nutrition courses

HNSC 7200X Seminar in Nutritional Practice

30 hours plus conference; 3 credits
Concepts and methods essential to the work of a practicing nutritionist. Nutritional assessment, counseling, evaluation, management, instruction, organization, and health promotion techniques.

Prerequisite: completion of 12 graduate credits in courses in nutrition. Corequisite: Health and Nutrition Sciences 7202X [722.1X].

HNSC 7201X Seminar in Clinical Applications of Nutrition Research

30 hours plus conference; 3 credits
The importance of the scientific literature in evaluating clinical techniques. Use and interpretation of this literature. Review of relevant research techniques. Examination of recent findings in topics of current clinical interest and their relation to clinical practice.

Prerequisite: completion of 12 graduate credits in courses in nutrition. Corequisite: Health and Nutrition Sciences 7203X [722.2X].

HNSC 7202X Fieldwork in Dietetic Practice I

600 hours fieldwork; 6 credits
Supervised experience in medical nutritional therapy, food systems management, public health and community wellness and independent practice. The supervised practice takes place at specifically approved sites throughout the New York metropolitan area and fulfills the core competencies that have been established by the Accreditation Council for Education in Nutrition and Dietetics (ACEND), the accrediting body of the Academy of Nutrition and Dietetics. Interns will engage in activities that include the application and provision of nutrition assessment, planning and implementation of nutritional care plans for diverse populations, counseling to individuals and groups, nutrition education, management functions and food systems analysis.

Completion of 12 graduate credits in courses in nutrition and acceptance into the Department's
Dietetic Internship. Corequisite: Health and Nutrition Sciences 7200X.

HNSC 7203X Fieldwork in Dietetic Practice II

600 hours fieldwork; 6 credits
A continuation of supervised fieldwork experience, specified activities, and assignments of Health and Nutrition Sciences 7202X.

Prerequisite: Health and Nutrition Sciences 7202X [722.1X]. Corequisite: Health and Nutrition Sciences 7201X.

HNSC 7210X Nutritional Biochemistry

45 hours; 3 credits
Emphasis on homeostatic mechanisms and hormonal controls of intermediary metabolism on a cellular level. Select topics related to the metabolic diseases and inborn errors of metabolism.

Prerequisite: a course in advanced nutrition and a course in nutritional chemistry or biochemistry or permission of the chairperson.

HNSC 7211X Micronutrients

45 hours; 3 credits
Physiological regulation of metabolism of vitamins and minerals; effects of deficiencies and excesses.

Prerequisite: a course in nutrition and a course in biochemistry; or permission of the chairperson.

HNSC 7212X Recent Developments in Nutrition

45 hours; 3 credits
Critical examination of current literature and scientific research in nutrition. Impact of current nutritional developments relating to individual, family, and community well-being.

Prerequisite: a graduate course in nutrition and a course in physiology and a course in statistics or permission of the chairperson.

HNSC 7213X Human Pathophysiology

45 hours; 3 credits
Etiology, pathogenesis, and clinical manifestations of human diseases

that are treated by nutritional therapies.

Prerequisite: a course in human physiology.

HNSC 7220X Nutrition and World Food Problems

45 hours; 3 credits
National and international nutritional conditions. Government problems, issues, policies concerning nutritional status of individuals and population groups. Regulation of food production and distribution in developing countries.

Prerequisite: a course in nutrition or permission of the chairperson.

HNSC 7221X Cultural Aspects of Foods

45 hours; 3 credits
Foodways, the study of relationships of food and culture. Ethnic, geographic, economic, social, religious influences on food habits and practices of individuals and families.

Prerequisite: a course in food science or nutrition or permission of the chairperson.

HNSC 7222X Advanced Experimental Foods

15 hours lecture, 60 hours laboratory; 3 credits
Research techniques in food science and their application to the study of selected problems in food marketing, preparation, service, storage. Opportunity for students to conduct individual experimental projects.

Prerequisite: a minimum of 10 credits in courses in food science and nutrition and two laboratory courses in biology and/or chemistry or permission of the chairperson.

HNSC 7223X Recent Developments in Foods

45 hours; 3 credits
Review and evaluation of recent trends, issues, research in product development, food processing, distribution. Modern food technology, application, use.

Prerequisite: 6 credits in courses in foods or permission of the chairperson.

HNSC 7224X Organizational Management of Food

45 hours; 3 credits
Decision-making skills involved in the field of food service management. Application of management theories to control of food costs, work simplification techniques, and management accountability in the food service system.

Prerequisite: completion of the core requirements in the program in nutrition.

HNSC 7230X Community Nutrition

45 hours; 3 credits
Community and public health nutrition with focus on factors affecting food consumption of a community and nutritional problems of select groups. Consumption patterns, assessment techniques, intervention programs, and evaluation of programs (federal, state, and local).

Prerequisite: a course in human nutrition and a course in life cycle, developmental or geriatric nutrition, or permission of the chairperson.

HNSC 7231X Pediatric Nutrition

45 hours; 3 credits
Effects of nutritional factors on development from prenatal growth to adolescence. Topics include: placental transport of nutrients, causes of congenital defects, breast feeding vs. bottle feeding, factors affecting rate of growth and age at puberty, effects of nutritional deficiencies and excesses, and the relationship of nutrients to morphogenetic or biochemical processes.

Prerequisite: a course in advanced nutrition and a course in physiology.

HNSC 7232X Geriatric Nutrition

45 hours; 3 credits
Recent knowledge of nutrition and human aging. Special emphasis on interactions of physiological stages, age, lifestyle, health, disease, and nutrition. Examination of research findings focusing on the relationship of nutrition to the structural and functional changes associated with the aging process.

Prerequisite: a course in nutrition or permission of the chairperson.

HNSC 7233X Nutrition and Behavior

45 hours; 3 credits
The relationship between nutrient deprivation during critical growth periods and interactional and learning deficits and maladaptive behavior patterns. Behavioral disorders and nutrient needs and idiosyncrasies. Psychodietetics: determinants of psychological reactions to foods and evolving food behavior patterns.

Prerequisite: one course in psychology and a course in human nutrition and a course in physiology.

HNSC 7234X Nutrition and Exercise

45 hours; 3 credits
Exploration of human nutritional requirements of exercise; the significance of intermediary metabolic pathways and the effect of dietary manipulation on exercise performance. (This course is the same as PEES 7279X [779X].)

Prerequisite: a course in human or animal physiology and a course in exercise physiology or biochemistry.

HNSC 7240X Assessment Techniques and Nutritional Care

45 hours; 3 credits
Study of the components of nutritional assessment as the initial step in nutrition care process. Emphasis on comparative analysis of dietary intake methods, interpretation of clinical laboratory values, evaluation of anthropometric and body composition methods, retrieval of medical history/physical examination data.

Prerequisite: a course in medical nutrition therapy and Health and Nutrition Sciences 7213X.

HNSC 7241X Nutritional Aspects of Disease

45 hours; 3 credits
Changes in requirements and utilization of nutrients; nutritional status of the individual during pathological states. Disease, malnutrition, and environmental pollution assaults on nutrient metabolism. Methodology and interpretation of recent clinical nutrition research.

Prerequisite: a course in medical nutrition therapy and Health and Nutrition Sciences 7213X or permission of the chairperson.

HNSC 7931X Principles of Nutrition Research

45 hours; 3 credits
Examination of experimental design as applied to nutrition research, including intervention, observational, survey, and animal models. Development of research topics; methods of data collection; interpretation and presentation of results; ethical considerations;

application of principles for development of research proposals and evaluation of the nutrition literature.

Prerequisites: advanced coursework in Nutrition and a course in Biostatistics

Elective courses

HNSC 7160X Health Issues of the Urban Society

30 hours plus conference; 3 credits
The effect of poverty on the health behaviors of people living in urban and suburban areas. Analysis of current public health problems in the context of race, class, and gender. The effects of transnational migration on health.

Prerequisite: Health and Nutrition Sciences 7110X [761X]

HNSC 7162X International Health

45 hours; 3 credits
Comparative analysis of health problems in developing and developed nations. Exploration of social, cultural, political, and economic determinants of health in developing countries. Examination of the role of multilateral and bilateral assistance programs in influencing changes in health status in developing nations.

HNSC 7172X Aging: A Study of Needs and Services

45 hours; 3 credits
A study of the needs and services to the aged, emphasizing family relationships, food, nutrition, health, economic stability, and security.

HNSC 7300X Maternal, Child, Reproductive, and Sexual Health: Social and Historical Perspectives

45 hours; 3 credits
Introduction and critical overview of public health issues, approaches, and concerns in the area of maternal, child, reproductive, and sexual health. The focus will be on the United States, but global issues will be considered as well. Specific topics will include the medicalization of maternity care and infancy/childhood; the consequences of 'risk' as a dominant ideology for maternal and child health care; issues in reproductive justice, with particular attention to race and class; the historic and contemporary influence of eugenics in public health; the history of midwifery and global trends in midwifery care; and the role of public health interventions in infant care.

HNSC 7301X Human Sexuality: A Public Health Perspective

45 hours; 3 credits
Through a Public Health lens, students will develop an awareness and understanding of human sexuality. Students will understand differences in sexual expression and be able to articulate the relationship between sexuality and health. Students will learn about the effect of sterility, infertility, contraception, and abortion on individuals and population health.

HNSC 7310X Maternal, Child, Reproductive and Sexual Health: A Life Course Perspective

45 hours; 3 credits
Theoretical framework as to how life course exposures affect vulnerability to disease, with an emphasis on the roles of maternal, child, reproductive and sexual health. This course also considers how intra- and inter-generational influences may be relevant to disparities in health. Readings address empirical patterns, prevailing theories and controversies regarding life course influences, and address interventions or policies that may be applied to improve population health.

Prerequisite: HNSC 7120X and HNSC 7150X.

HNSC 7932X Introduction to Health Survey Methods and Design

45 hours; 3 credits
Introduction to health survey design and methodology. Topics include: types of inquiries best suited for survey instruments, conditions necessary for sampling, how to design, and develop both questions and survey instruments, how to test validity and reliability, conduct data cleaning and analysis.

Prerequisites: HNSC 7150X and HNSC 7930X.

Seminars, special topics, independent research

HNSC 7901X Internship I

90 hours; 3 credits
Supervised internship in a health or nutrition counseling setting similar to that in which the student expects to work. Interns are expected to participate in the complete range of position-defined responsibilities and to be supervised jointly by certified counseling personnel and a faculty adviser from the Department of Health and Nutrition Sciences.

Prerequisite: completion of 27 graduate credits in courses in health and nutrition sciences, including Health and Nutrition Sciences 7183X [762X] and one of the following: Health and Nutrition Sciences 7200X [720X], 7195X [765X] or 7185X [774.5X], and permission of the chairperson.

HNSC 7902X Internship II

90 hours; 3 credits
Continuation of Health and Nutrition Sciences 7901X [790.1X].

Prerequisite: Health and Nutrition Sciences 7901X [790.1X] and permission of the chairperson.

HNSC 7910X Special Topics

45 hours; 3 credits
Topical discussion of recent contributions in health science. Course content varies from term to term.

HNSC 7915X Independent Reading

Minimum of 135 hours of independent work and conference; 3 credits
Reading, approved by a faculty adviser, in an area of health science. One or more written reports or a final examination.

Prerequisite: matriculation for the M.S. in Ed. in health science or for the M.A. in community health; and permission of the deputy chairperson.

HNSC 7920X Supervised Fieldwork in Public Health

180 hours of fieldwork plus weekly seminars; 3 credits
Students carry out 180 hours of supervised fieldwork that is intended to bridge academic preparation and public health practice. Knowledge and skills from the core MPH and specialization courses are applied in a public health agency, community organization or other setting relevant to the student's academic background, specialization and career expectations. This is accomplished under the supervision and guidance of an experienced preceptor. Field-based hours are implemented with classroom and individual meetings along with online communication. Aside from deliverables required by the preceptor, the student develops a reflection paper, a self-evaluation and a capstone proposal.

Prerequisites: Completion of at least 18 MPH credits that include Health and Nutrition Sciences 7120X, Health and Nutrition Sciences 7150X, and two courses in the student's area of specialization.

HNSC 7921X Internship in Public Health II

150 hours; 3 credits
Supervised internship in a public health setting. Continuation of Health and Nutrition Sciences 7920X [764.4X].

Prerequisite: Health and Nutrition Sciences 7920X [764.4X] and matriculation in the M.P.H. program and permission of the chairperson.

HNSC 7925X Internship and Field Experience Seminar in Community Health

90 hours of fieldwork plus weekly seminars; 6 credits
Supervised individual projects in community health education in a community or health agency.
Culminating capstone experience for students in the MA Community Health concentration.

Prerequisite: Health and Nutrition Sciences 7170X, 7163X and 7171X, or permission of the deputy
chairperson.

HNSC 7935X Research Seminar II

45 hours; 3 credits
Examination of quantitative and qualitative techniques appropriate for research in the health sciences. Class discussions of each student's efforts in developing a master's thesis. Not open to students who are enrolled in or have completed Health and Nutrition Sciences 7940X [791.3X] or 7950X [797.1X].

Prerequisite: Health and Nutrition Sciences 7930X [791.1X], and a GPA of 3.00 (B) or better in graduate courses completed to date.

HNSC 7940X Research Seminar III

45 hours; 3 credits
Examination of quantitative and qualitative techniques appropriate for research in the health sciences. Class discussion of each student's effort in developing a master's paper. This course may be taken two times. (Not open to students who are enrolled in or have completed Health and Nutrition Sciences 7935X [791.2X].)

Prerequisite: Health and Nutrition Sciences 7930X [791.1X] and a GPA of 3.00 (B) or better in graduate courses completed to date.

HNSC 7950X Capstone Project

30 hours plus conference; 3 credits
This course consists of a structured seminar aimed at allowing students to apply experiences gained during their graduate program and synthesize that knowledge and experience in the form of a major writing project. It is expected that students use a combination of synthesized evidence, theoretical models, and empirical research to answer a public health research question or practice problem using interdisciplinary perspectives. Not open to students who have completed Health and Nutrition Sciences 7935X [791.2X].

Prerequisite: Health and Nutrition Sciences 7930X [791.1X] with a grade of B or higher, Health and Nutrition Sciences 7920X, and a GPA of 3.00 (B) or better in graduate courses completed to date.

HNSC 7995X Independent Study

Minimum of 135 hours; 3 credits
Research project in a selected area of health science supervised by a faculty member.

Prerequisite: matriculation for the M.S. in Ed. in health science or for the M.A. in community health; and permission of the deputy chairperson.

HNSC 7999X Thesis Research

Hours to be arranged; 3 credits
Research for master's thesis supervised by a faculty member. Credit is not earned until the thesis is accepted. Students register for this course only once.

Prerequisite: permission of the deputy chairperson.

The following inactive course(s) will only be offered if there is sufficient demand:

HNSC 7195X Human Relations Training Workshop in Sex Education

HNSC 7196X Family Living and Sex Education

History

Department office: 1105 Boylan Hall
Phone: 718.951.5303

Full-time Faculty

Professors: Greenwald, Johnson, SenGupta, Troyansky, Wills
Associate Professors: Banerjee, Carp, Ebert, Meyer, Napoli, O'Keeffe, Rawson, Remy, Warren
Assistant Professors: Fishman, Ibrahim, Mancia, Stern Gabbay

The Department of History, with award-winning faculty and students, offers rigorous study in a broad range of regions, methods, and issues across historical time. In course work and seminars, the instructors, who are published authors of books and scholarly articles, offer students a wealth of information about and insight into history in the United States, Europe, Asia, Africa, and Latin America as well as transnational and comparative history. The department is also notable for providing study in historiography and examining problems involved in the accurate recording of history. With a philosophy that includes the belief that no single methodology provides the "right" answer in historical investigation and encourages inquisitiveness, the department offers courses in political, social, and cultural history, including the history of ideas, religions, and gender. Also explored are such diverse issues as slavery, the meaning of "cultural renaissance," the conflicts of the Middle East, and the course and consequences of the Vietnam War. Many graduates go on to careers in teaching, law, archival management, and public service.

M.A. degree program in history
HEGIS code 2205; SED program code 02107

The M.A. in history program provides an intensive introduction to the study of history in a wide variety of subject areas and prepares students for careers in teaching, doctoral-level work in the field, and professions in which knowledge of the past and facility in historical research methods are essential components. Faculty specializations range from the ancient to modern periods in European, Latin American, African, Asian, Middle Eastern and American history. Approaches include social and cultural, political, diplomatic, environmental, and economic history.

Matriculation requirements

Applicants must have completed at least 12 credits in advanced undergraduate courses in history or, with permission of the chairperson or graduate deputy, 12 credits in advanced undergraduate courses in history, economics, and political science.

Students admitted as matriculants in history must complete History 7000X with a grade of A or B by the end of their first fall semester or they will lose matriculated status.

Students admitted as nonmatriculants must complete History 7000X with a grade of A or B in order to achieve matriculated status in the Department of History.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

General requirements for all students

To fulfill degree requirements, M.A. students must complete either thirty or thirty-three (30-33) credits in History Department courses. As detailed in the options below, students selecting the Thesis Option must complete thirty (30) credits and students selecting the Non-Thesis Option must complete thirty-three (33) credits.

Among the 30-33 hours of coursework undertaken to fulfill the general degree requirements, all students must complete three credit hours in each of three geographic areas: U.S., Europe, and the non-western world. One of these courses must cover in whole or substantial part the pre-1800 period.

Students selecting both Thesis and Non-Thesis Options must also complete:

(1) History 7000X with a grade of A or B. All students must take History 7000X during their first fall semester in the program, and must receive a grade of A or B to satisfy graduation requirements; and (2) History 7050G.

Thesis Option Requirements:

Completion of general department requirements and six (6) courses numbered from History 7110X-7780X.

After completing both History 7000X and 12 hours of course work, students who select the thesis option must take at least one Independent Reading (History 7840G) or one Independent Research (History 7850G) course with their chosen thesis adviser. A second Independent Study or Independent Research course could, with permission, substitute for the sixth of the courses numbered from History 7110X-7780X. Following the Independent Reading course, the thesis adviser will evaluate the student's preparedness to write a thesis. A student approved to write a thesis will then be required to submit a proposal to the adviser.

Non-Thesis Option Requirements:

Completion of general department requirements and nine (9) courses numbered History 7110X to History 7780X. With the permission of the chairperson or the graduate deputy, students may replace a maximum of two (2) of these courses with History 7840G and/or History 7850G. Students who select the non-thesis option must provide a portfolio containing two substantial papers written for graduate-level history courses taken in the History Department at Brooklyn College, and must pass an oral defense before a departmental committee of full-time faculty. At least one of the two papers submitted must be a research paper based on an extensive use of primary sources.

Department Recommendations

Students should consult the graduate deputy early in their course of study and each semester thereafter.

Students who intend to study toward a doctoral degree should have completed at least two years of college-level foreign language study.

Students who intend to study toward a doctoral degree should ascertain the matriculation requirements of the graduate school they plan to attend.

CUNY Ph.D.

The City University of New York offers a doctoral program in history. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Department courses may be credited toward the CUNY history doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the History Department and the executive officer of the doctoral program.

Courses

HIST 7000X Introduction to the Study of History

30 hours plus conference; 3 credits
Analysis of historical sources and of approaches to writing history.

Transnational and comparative history

HIST 7110X Main Currents in Contemporary World History

30 hours plus conference; 3 credits
The history of the main world regions and their interrelationship since 1945. Breakdown of the wartime alliance; confrontation between the West and the Soviet Union; the atomic age; the eras of the cold war and peaceful coexistence; wars of national liberation and the new states of Africa and Asia. Historical contexts of modern revolutions and wars. Breakup of the Soviet Union; Persian Gulf War and the primacy of oil; the new nationalism and ethnic conflicts; the global economy and the silicon age.

HIST 7130X Global Environmental History

30 hours plus conference; 3 credits
Interactions among human societies and the natural environment within the context of global history. Attention to pre-modern environmental relationships; the ecological expansion of Europe; the impact of industrialization, urbanization, and colonialism; and the rise of conservation and environmental movements.

European history

HIST 7120X The Industrial Revolution of the Eighteenth and Nineteenth Centuries

30 hours plus conference; 3 credits
The early modern economic and social system. Changes in agriculture, demography, technology, work, family, and class structure to 1850. New energy sources and industrial materials, relations between science and industry, business organization, and social movements from 1850 to 1914.

HIST 7210X Medieval Europe

30 hours plus conference; 3 credits
Topics in the culture and society of western Europe from late antiquity to the fifteenth century. The transition from the Roman world. The Carolingians. Feudal society. Agricultural change and the commercial revolution. The Crusades. Jewish-Christian-Muslim relations. Universities and Scholasticism. Chivalry. Mysticism. The Church and the Papacy. The Black Plague. Romanesque and Gothic art and architecture. The development of the nation states and empires of Europe. The 'birth' of 'modernity.'

HIST 7220X Early Modern Europe

30 hours plus conference; 3 credits
Europe from 1350 to 1650. Topics include the emergence of the 'Renaissance' in Italy and in Northern Europe; courtly and civic culture; humanism, the arts, and education; the printing revolution; guilds and confraternities; capitalism and mercantilism; European exploration and 'discovery'; the religious Reformations; the development of absolute monarchy; the Scientific Revolution; and the overall character of Europe's transition to modernity.

HIST 7230X The Enlightenment

30 hours plus conference; 3 credits
Development of Western thought from Locke to Kant. Its intellectual, political, and social aspects.

HIST 7310X The Old Regime and the French Revolution

30 hours plus conference; 3 credits
Background and development of the French Revolution. The rise of Napoleon. Controversial problems of historical interpretation.

HIST 7320X France from 1815

30 hours plus conference; 3 credits
A survey of the economic, social, political, and intellectual history of France from the close of the Napoleonic regime to the Fifth Republic, with emphasis on popular customs and daily living on the farms and in the cities; the revolutionary tradition; the lives of workers; the traditions of the middle class; the struggles of left and right.

HIST 7340X History of Russia since 1856

30 hours plus conference; 3 credits
Russian and Soviet history from the aftermath of Russia's defeat in the Crimean War to the present. Emphasis on the Imperial Estate System and its erosion; The Great Reforms; imperial governance of a multi-ethnic population; the Russian intelligentsia; revolutionaries and revolution; Bolshevism, Leninism, and Stalinism; everyday Soviet life; art and ideology; cold war; de-Stalinization, stagnation, and collapse; Post-Sovietism.

HIST 7350X Stalinism

30 hours plus conference, 3 credits
Stalinism and historiographical debates on Stalinism. Critical analysis of ideology, citizenship, the economy, state violence, gender, ethnicity, war, everyday life, and selfhood in the Soviet Union under Stalin. Study of and debates over historical memory of Stalin and Stalinism in the late Soviet and post-Soviet eras.

HIST 7370X The Coming of the Two World Wars

30 hours plus conference; 3 credits
The origins of World Wars I and II; diplomatic background, domestic causes, interpretations, historiography. The imperialist rivalries, military alliances, and nationalist conflicts before 1914. Nazi aggression and appeasement before 1939.

HIST 7380X Europe Since 1945

30 hours plus conference; 3 credits
European politics and society from 1945 to the present. Emphasis on changes in European society brought about by the catastrophes of war and genocide: "deradicalization" of the right and left, the politics of memory, decolonization, the impact of the United States, the collapse of communism and the USSR, German reunification, European economic integration, and the Balkan wars.

HIST 7390X History of Marxism

30 hours plus conference; 3 credits
Sources of Marxian thought. Development of "orthodox" and "revisionist" strands in Marxism until World War I. Transmission to eastern Europe. Leninism and its appeal in Asia, Africa, and the Americas.

United States history

HIST 7411X The Colonial Period

30 hours plus conference; 3 credits
Civilization of the British American colonies. Colonial intellectual trends. Intercolonial aspects of social development. Foundations of American nationality to 1763.

HIST 7412X The American Revolution and the Constitution

30 hours plus conference; 3 credits
Political, social, and economic forces that accompanied the American Revolution. Nature of the critical period. Drafting and ratification of the Constitution.

HIST 7420X Civil War and Reconstruction

30 hours plus conference; 3 credits
Scholarly interpretations of the U.S. Civil War; its memory; its influence on concepts of citizenship and states' rights. Slavery, race, and the "Peculiar South"; westward expansion; new forms of mass politics, and economic and cultural changes within northern society that shaped the antislavery movement. The impact of class, gender, and racial affiliations. Debates in Reconstruction historiography.

HIST 7425X The Gilded Age and the Progressive Era

30 hours plus conference; 3 credits
Political, economic, and social issues of the Gilded Age. Populist revolt. Spanish-American War; overseas expansion and commitments. Progressive reforms. World War I and its immediate consequences.

HIST 7430X Twentieth-Century America

30 hours plus conference; 3 credits
American history from the aftermath of the Progressive Era until the present. The course will focus on the effects of the Wilson presidency; the Depression and American life; the New Deal, World War II, and the onset of the Cold War; the changing nature of postwar liberalism; the United States in Vietnam; Richard Nixon and Watergate; environmentalism, feminism, and new social movements; and the revitalization of American conservatism.

HIST 7440X History of American Political Parties

30 hours plus conference; 3 credits
Development, role, and impact of political parties in American history.

HIST 7441X American Economic History

30 hours plus conference; 3 credits
Historical analysis of such factors as the frontier, immigration, absence of a rigid class system, regionalism, sectionalism in development of American economic thought and institutions from colonization through the nineteenth century.

HIST 7442X Modern American Diplomatic History from 1898

30 hours plus conference; 3 credits
American international relations from the Spanish-American War to

the present.

HIST 7444X American Environmental History

30 hours plus conference; 3 credits
Interactions among humans and the North American environment. Attention to influence of environment on human culture, impact of human culture on the environment, and ideas about nature. Native American approaches to the natural world; environmental impact of European colonization; rise of industrial cities; romanticism; conservation and preservation; environmentalism and environmental justice. (Not open to students who are enrolled in or have completed History 7600X [760X], Special Topics in History, with the topic American Environmental History.)

HIST 7445X The Environmental History of Urban America

30 hours plus conference, 3 credits
Interactions between urban societies and the natural environment in United States history. Attention to early urbanization and industrialization; the relationship between city and country; the development of pastoral parks and suburbs; pollution, public health, and environmental justice; and sprawl.

HIST 7446X The History of the American Presidency

30 hours plus conference; 3 credits
The history of the American presidency from the constitutional era until the present day. Topics include: the constitutional debates over the executive; the establishment and consolidation of the office; the records of important presidents, such as Washington, Lincoln, and the Progressive Era presidents; FDR and the expansion of the executive branch bureaucracy; the modern presidency and the Cold War, the law, foreign affairs, and public opinion.

HIST 7448X American Constitutional History

30 hours plus conference; 3 credits
This course will examine American constitutional history since 1750. Beginning with the Revolutionary Era and the Constitutional Convention, the course will cover the establishment of the Supreme Court, nineteenth-century debates over slavery and economics, and the changing role of the Court in twentieth-century America.

HIST 7450X History of Black Americans

30 hours plus conference; 3 credits
Role, status, aspirations of Blacks in American society from the colonial period to the present.

HIST 7460X Immigrant Groups in American History

30 hours plus conference; 3 credits
Historical problems of acculturation and identity of immigrant groups.

Latin American/Caribbean/Asian/African history

HIST 7512X Modern Latin America

30 hours plus conference; 3 credits
Transformation of the leading countries of Latin America from the age of reform and independence. Emergence of the changing political culture, society, and economic order of today.

HIST 7515X The Caribbean from the Coming of the Europeans to the Present

30 hours plus conference; 3 credits
The history and historiography of the Caribbean basin. The coming of the Europeans and destruction of indigenous populations and cultures. The first colonization and Spanish dominance. The development of the sugar and slave complex. The Haitian Revolution and the end of slavery in the colonial empires. Nineteenth-century neglect. The United States and the new colonialism. The gradualist approach to independence in the British West Indies. Haiti, the Dominican Republic, and Cuba since 1900. Present attempts at social and economic development.

HIST 7517X Slavery in the New World

30 hours plus conference; 3 credits
Slavery in the Americas from an Atlantic perspective (including developments in Africa and Europe) from the fifteenth century until abolition. Topics to be addressed include: the historiography of slavery, slavery in Europe from the Greeks and Romans to fifteenth-century Iberia, the changing nature of slavery in Africa, the slave trade, the economics of slavery, the plantation system, daily life among slaves and slaveowners, slavery and race, hegemony, resistance, slave revolts, the Haitian Revolution, abolition in the Americas, and post-emancipation challenges.

HIST 7530X Modern Ottoman History, 1700-1923

30 hours plus conference; 3 credits
Historiography and historical background; Ottomans and their wider world; statecraft and autocracy; trade and economic life; society and popular culture; women in the empire; peasants and townspeople; minority relations; encroaching Europe and reform; Egypt and Muhammad Ali; the Young Ottomans; centrality of the Balkans and consequences of their loss; debates over "decline"; debt crisis; Young Turks and centralization; pan-Islam; emergence of Arab nationalism; Ottomans and Zionists; war and collapse; imperial legacies.

HIST 7540X Nationalism and Revolution in Modern East Asia

30 hours plus conference; 3 credits
Rise and development of nationalist and revolutionary movements in China, Japan, Korea, selected countries of Southeast Asia in modern times. Leaders, ideologies, political parties.

HIST 7550X Pre-Modern China

30 hours plus conference; 3 credits
The history of China from its earliest origins to the Ming dynasty. Topics will vary, but may include the earliest Stone-Age civilizations, origins of the Chinese state and religion, the period of classical philosophy, the first conquest dynasties, the development of popular culture.

HIST 7552X Modern China

30 hours plus conference; 3 credits
China from the early nineteenth century to the present. Breakdown of the Manchu dynasty and transformation of the traditional civilization during the republican and Communist eras.

HIST 7562X Modern South Asia

30 hours plus conference; 3 credits
India under British rule, and India, Pakistan, and Bangladesh since independence. Evolution of nationalist movements and problems of

modernization. Role of these independent nations in world affairs.

HIST 7566X Imperialism and Nationalism in South and Southeast Asia
30 hours plus conference; 3 credits
Patterns of British and French rule in South and Southeast Asia from the nineteenth century. The rise of nationalism in India and Vietnam from the late nineteenth century. Comparative analysis of these movements, especially the development of leadership, organization, and ideology, and the interplay of violent and nonviolent techniques of struggle. Impact of World War II and Japanese expansion for European rule and nationalist movements. Independence in the postwar period and the continuing role of great powers in the region. Some comparisons will be made to Indonesia, Malaya, Burma, and Cambodia.

HIST 7568X Gender, Race, and Empire (19th-20th centuries)
30 hours plus conference, 3 credits
Traces intersections of gender, race, and empire in regulation and maintenance of European, particularly British, colonies in different parts of Asia and Africa in the nineteenth and twentieth centuries. Investigates race and gender specific ideologies introduced by colonial regimes and their impact on native population in a comparative framework. Explores connections between women and imperialism and involvement and activism of European and American women with nationalist and women's questions in South Asia and beyond.

HIST 7570X Asia and the United States
30 hours plus conference; 3 credits
Lectures, critical readings, discussions, and research papers on the relations of China, Japan, India, Vietnam, and the United States from the late eighteenth century to the present. Some attention will be given to Asian immigrants in the United States from the mid-nineteenth century to the present

HIST 7580X Social Change in Africa, 1750-1945
30 hours plus conference; 3 credits
Introduction to social change in sub-Saharan Africa from the era of the slave trade to the end of World War II. Emphasis on internal transformations sparked by industrialization, imperial expansion and colonization, including both political innovations and changing market relations as well as transformations in kinship and gender relations. In depth coverage of slavery, women in the economy, the development of an African working class, religious transformations, the emergence of new elites, the growth of modern political activism, and resistance to colonization. This course is the same as Africana Studies 7050X.

Special topics

HIST 7600X Special Topics in History
30 hours plus conference; 3 credits
Offered at intervals. Topics vary. May be taken more than once, but a student may not repeat the same topic.

Colloquia

HIST 7050G Research Seminar
30 hours plus conference; 3 credits
Application of basic principles and techniques of historical research and writing. Offered by various department members. Seminar topics are chosen by the instructor.

Prerequisite: History 7000X [700X] with a grade of A or B and permission of the chairperson or the graduate deputy.

HIST 7710X Colloquium in Medieval History
30 hours plus conference; 3 credits
Critical readings, discussions, and analytical papers on significant works and/or research papers in European history from the fifth through the fifteenth century.

HIST 7720X Colloquium in Early Modern European History
30 hours plus conference; 3 credits
Critical readings, discussions, and analytical papers on significant works and/or research papers in European history from the fifteenth through the eighteenth century.

HIST 7730X Colloquium in Modern and Recent European History
30 hours plus conference; 3 credits
Critical readings, discussions, and analytical papers on significant works and/or research papers in European history from the end of the eighteenth century to the twenty-first century.

HIST 7740X Colloquium in Early American History
30 hours plus conference; 3 credits
Critical readings, discussions, and analytical papers on significant works and/or research papers in American history from the colonial to the early U.S. Republic.

HIST 7750X Colloquium in Nineteenth-Century American History
30 hours plus conference; 3 credits
Critical readings, discussions, and analytical papers on significant works and/or research papers in U.S. history during the nineteenth century.

HIST 7760X Colloquium in Twentieth-Century American History
30 hours plus conference; 3 credits
Critical readings, discussions, and analytical papers on significant works and/or research papers in United States history since 1900.

HIST 7770X Colloquium in Asian History
30 hours plus conference; 3 credits
Critical readings, discussions, and analytical papers on significant works and/or research papers in comparative Asian history.

HIST 7780X Colloquium in Middle Eastern History
30 hours plus conference; 3 credits
Critical readings, discussions, and analytical papers on significant works and/or research papers in Middle Eastern History.

HIST 7830G Master's Essay
Hours to be arranged; 3 credits
Research for master's essay supervised by a faculty member. Credit is not earned until the essay is accepted. Students may register for this course only once.

Prerequisite: History 7000X [700X] and 7050G [705G] (or 7850G [785G]); and permission of the instructor, and of the chairperson or the graduate deputy.

HIST 7840G Independent Reading

Minimum of 135 hours of independent reading and conference; 3 credits
Independent study of readings from a selected area of history supervised by a faculty member. Findings are presented in written reports and/or a final examination. This course may be taken for credit twice.

Prerequisite: History 7000X [700X]; and permission of the instructor, and of the chairperson or the graduate deputy.

HIST 7850G Independent Research

Minimum of 135 hours of independent research and conference; 3 credits
Extensive research under faculty supervision. Findings presented in a substantial research paper.

Prerequisite: History 7000X [700X] with a grade of A or B; and permission of the instructor, and of the chairperson or the graduate deputy.

The following inactive course(s) will only be offered if there is sufficient demand:

HIST 7330X Modern Britain: 1780 to the Present

HIST 7384X Women in Modern Europe

Judaic Studies

Department office: 3111 James Hall
Phone: 718.951.5229

Full-time Faculty

Professors: Reguer, Shapiro
Associate Professor: Flatto
Assistant Professors: Amanik, Brodsky

The Department of Judaic Studies is committed to rigorous, critical, and serious teaching and research about the Jewish civilization born in the ancient Middle East that has flourished in a variety of forms in many places for more than three thousand years. The department's course offerings and programs reflect the chronological scope and geographic diversity of the Jewish experience, with particular strength in the fields of intellectual, religious, and social history, founded on analytic study of primary sources.

Areas of study include the Bible; Talmud and Midrash; Jews of Central and Western Europe and America; the Holocaust; Israel and the Middle East; and modern Jewish thought.

M.A. degree program in Judaic studies
HEGIS code 0309; SED program code 79419

The M. A. in Judaic studies program offers advanced instruction and research in many areas of Judaic studies. Our graduates have found new employment or have enhanced their present careers in such diverse fields as education, non-profit organizations, and social work. Others have been accepted into doctoral programs. The 30-credit program requires a minimum of 21 credits to be completed in the department and 9 credits to be chosen in consultation with the department chairperson. In completing the degree the student may opt either to take a comprehensive examination or to write a thesis.

Matriculation requirements

Applicants must offer at least 18 credits in advanced undergraduate courses in Judaic studies or the equivalent. Applicants must offer minimal competency in the Hebrew language equivalent to two years of college-level Hebrew. An interview is required at the time of application. General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty credits are required for the degree. Courses in Judaic studies are grouped in the following areas of study:

A.
1. Bible: Judaic Studies 7704X, 7706X, 7707X, 7708X, 7821X.
2. Talmud and Midrash: Judaic Studies 7711X, 7712X, 7714X, 7715X, 7822X.

B.
3. Jews of Central and Western Europe: Judaic Studies 7720X, 7722X, 7723X, 7724X, 7823X.
4. Jews of Eastern Europe: Judaic Studies 7730X, 7731X, 7732X, 7736X, 7824X.
5. Holocaust: Judaic Studies 7747X, 7748X, 7749X, 7750X, 7825X.

C.
6. Jews of America: Judaic Studies 7741X, 7742X, 7744X, 7749X, 7826X.
7. Israel and the Middle East: Judaic Studies 7755X, 7751X, 7752X, 7754X, 7827X.
8. Modern Jewish Thought: Judaic Studies 7720X, 7754X, 7760X, 7761X, 7828X.

Students must complete 21 credits in courses in the Judaic Studies Department. The following courses are required: four courses in one of the eight areas of study (selected from one of the categories A, B, or C); and at least one additional course selected from each of the two other categories (A, B, or C). Students who choose to write a thesis are required to take Judaic Studies 7783G. The remaining 9 credits required for the degree may be in courses in other departments, or outside the college, with the approval of the chairperson.

Before completing 18 credits, students must pass an advanced language examination, administered by the department, which tests their ability to read and comprehend Hebrew or another foreign language pertinent to their area of specialization and approved by the department.
After completing all course work, except Judaic Studies 7783G, students must pass a comprehensive examination or submit a thesis acceptable to the department. Students who choose to submit a thesis may do so only with the approval of the department. Information about the thesis and comprehensive examination is in the section "Academic Regulations and Procedures" of the Graduate Buleltin

Courses

Judaic Studies

JUST 7720X Western European Jewry from the Seventeenth Century to 1815
30 hours plus conference; 3 credits
A survey of the economic, social, and cultural changes that transformed Western European Jewry in the seventeenth and eighteenth centuries, and the process of adjustment and modernization in the wake of these changes.

JUST 7723X Topics in the History of Western and Central European Jewry
30 hours plus conference; 3 credits
A research seminar dealing with different aspects of Western and Central European Jewry offered by various department members. Topics vary from term to term. Readings and research in source materials; students organize and present their findings in written papers. Students may complete this course for credit up to three times with the permission of the chairperson, but may not repeat topics.

Prerequisite: permission of the instructor.

JUST 7724X Modern German Jewry

30 hours plus conference; 3 credits
A study of the German-speaking Jews of Central Europe. Focus on emancipation and acculturation, religious tradition and reform, patterns of occupation and residence, communal organization and political activities, and anti-Semitism.

JUST 7730X East European Jewry Until 1917

30 hours plus conference; 3 credits
A survey of Jewish life in Poland, Lithuania, and Russia from the Middle Ages until 1917, emphasizing its communal and political history.

JUST 7731X Jews in Eastern Europe, 1917 to the present

30 hours plus conference; 3 credits
Changing patterns of Jewish life in Soviet Russia, Lithuania, and Poland between two world wars; Soviet Jews during and after World War II, and the remnants of Polish Jewry in the post-Holocaust era.

JUST 7736X Hasidic Dynasties: Leadership and Community

30 hours plus conference; 3 credits
Major Hasidic dynasties. Works of Hasidic leaders. Impact of their thought and personality on their respective dynasties and communities.

JUST 7741X The Jewish Experience in the United States

30 hours plus conference; 3 credits
Review of American Jewish history, including migrations, the Americanization process as well as religious and political factors.

JUST 7747X Perspective on the Holocaust

30 hours plus conference; 3 credits
Analysis of the Holocaust in the context of Western civilization and the Jewish experience. Impacts of anti-Semitism and racism on international political and interreligious relations. The Jewish response to the Holocaust and its aftermath; political, psychological, theological reorientation.

JUST 7748X The Holocaust in Literature

30 hours plus conference; 3 credits
A study of the Holocaust in world literature. The transformation of the Holocaust from an historical event into an artistic expression. Its major themes, patterns, symbols, traditions, and vocabulary in memoirs, diaries, fiction, drama, and poetry. All readings in English.

JUST 7749X The British and American Response to the Holocaust
30 hours plus conference; 3 credits
Focus on the response of the British and American people and their governments to the Holocaust. Particular emphasis on the response of the British and American Jewish communities and their organizational responses from 1933 to the present.

JUST 7750X Holocaust Seminar

30 hours plus conference; 3 credits
A research seminar dealing with different aspects of the Holocaust offered by various department members. Topics will vary from term to term. Readings and research in source materials; students organize and present their findings in written papers. Students may complete this course for credit up to three times with the permission of the chairperson but may not repeat topics.

Prerequisite: permission of the instructor.

JUST 7751X Israel in the Modern World

30 hours plus conference; 3 credits
Aspects of Israel's international position and its foreign policy; the national Jewish revival; Western and Oriental cultures in Israel; Arab-Israeli relations and African-Israeli relations.

JUST 7761X Contemporary Jewish Thought

30 hours plus conference; 3 credits
An in-depth consideration of one major contemporary Jewish thinker. Emphasis on the general theory of religion as well as the particular interpretation of Judaism given in each case. Among those to be studied are J.D. Soloveitchik, Martin Buber, and Mordecai Kaplan.

JUST 7763X Suffering: The Book of Job and Its Literature

30 hours plus conference; 3 credits
An in-depth study of The Book of Job and the literature dealing with it. Discussion of the way that religious writers, both ancient and modern, deal with the issue of suffering. Why "bad things happen to good people." This course is the same as Liberal Studies 7010X [743X].

JUST 7783G Thesis Research

Hours to be arranged; 3 credits
Research for the master's thesis supervised by a faculty member.

Prerequisite: permission of the chairperson.

JUST 7785G Independent Study

Hours to be arranged; 3 credits
Readings in a selected area of Judaic studies supervised by a faculty member. Research paper and/or final examination.

Prerequisite: permission of the chairperson.

JUST 7821X Special Topics: Bible

30 hours plus conference; 3 credits
Topics vary from term to term.

JUST 7822X Special Topics: Talmud and Midrash

30 hours plus conference; 3 credits
Topics vary from term to term.

Prerequisite: permission of the chairperson

JUST 7823X Special Topics: Jews of Central and Western Europe

30 hours plus conference; 3 credits
Topics vary term to term.

JUST 7824X Special Topics: Jews of Eastern Europe

30 hours plus conference; 3 credits
Topics vary from term to term.

JUST 7825X Special Topics: Holocaust

30 hours plus conference; 3 credits
Topics vary from term to term.

JUST 7826X Special Topics: Jews of America

30 hours plus conference; 3 credits
Topics vary from term to term.

JUST 7827X Special Topics: Israel and the Middle East

30 hours plus conference; 3 credits
Topics vary from term to term.

JUST 7828X Special Topics: Modern Jewish Thought

30 hours plus conference; 3 credits
Topics vary from term to term.

The following inactive course(s) will only be offered if there is sufficient demand:

JUST 7707X Dead Sea Scrolls

JUST 7754X Zionism

JUST 7755X Jews in the Moslem World

JUST 7760X Jewish Perspectives on Contemporary Ethical Issues

Kinesiology

Department office: 428 West Quad
Phone: 718.951.5514

Full-time Faculty

Professor: Dunbar
Associate Professors: Blitzer, Leung, Zeng
Assistant Professors: Burden, Chow, Malvone, Smith
Lecturers: Cai, Geraghty, Grillo

The Department of Kinesiology provides students with the knowledge and experience required to achieve rewarding careers in which to meet health challenges of the twenty-first century. Professionals in physical education, sport management, and exercise science will have a unique opportunity to apply their skills at a time when physical activity and fitness are among the nation's chief public health objectives.

M.S. degree program in education: physical education teacher (all grades) HEGIS code 0835; SED program code 26745

This Master of Science degree program is designed to train students to be effective teachers and coaches in all grades (kindergarten through grade 12). Course work in the School of Education is required. The New York State Education Department licenses graduates of registered teacher education programs who meet the state requirements for teachers.

This Master of Science degree program is designed to train students to be more effective teachers and coaches in all grades (kindergarten through grade12). The New York State Education Department licenses graduates of registered teacher education programs who meet the state requirements for teachers.
The M.S. degree programs in physical education leading to Initial Certification and/or Professional Certification for physical education teachers (all grades) are designed to train students to be effective teachers and coaches in all grades (kindergarten through grade 12). The programs offers experienced physical education teachers the opportunity to develop their practice and to expand their knowledge of physical education and the field of education as a whole. Our programs combines rigorous and rewarding study in physical education with a focus on developing leadership skills and expanded knowledge in the field.
The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the Graduate Deputy.
Matriculation requirements
Applicants must hold an undergraduate degree in physical education prior to enrollment in this program.
Applicants must have a minimum undergraduate grade point average of 2.75. A minimum average of 3.00 in graduate courses is required to maintain matriculation.
International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Degree requirements

Thirty-six credits are required for the degree.
All newly admitted graduate students in any program should ensure that KINS 7000X Research Methods and Design is taken in their first semester of enrollment.
Students will complete the following:
KINS 7000X Research Methods and Design
KINS 7100X Technology in Kinesiology
KINS 7110X Group Dynamics in Sport and Physical Education
KINS 7149X Advanced Instructional Strategies for Physical Education
KINS 7151X Motor Development and Analysis
KINS 7154X Sport and Exercise Psychology
KINS 7156T Supervision in Physical Education
KINS 7157X Physical Education Curriculum in Secondary School
KINS 7159X Developing School-Based Leadership Skills
KINS 7999X Research Seminar in Physical Education
Students may select 6 credits from any 7000 level course offered by the Department of Kinesiology. Other elective courses may be selected with the approval of the Graduate Deputy or Department Chair.

M.S. degree program in exercise and sport science HEGIS code 1299.30; SED program code 89178

This Master of Science degree program is designed to teach students about human movement, exercise physiology, cardiopulmonary rehabilitation,

sport psychology, and biomechanics. It is designed for students who want to work in these fields, advance their knowledge beyond their undergraduate education, perhaps to prepare for study at the doctoral level.

Tracks
* Exercise Science and Rehabilitation
* Sport Science

Matriculation requirements

Applicants must offer at least one undergraduate course in each of the following: human physiology, human anatomy, physiology of exercise, and biomechanics. A course in physics and a course in chemistry are recommended. Competitive applicants typically have undergraduate degrees in Exercise Science or Physical Education. Other degrees may also provide appropriate educational background (i.e. Physical Therapy, Athletic Training, etc). Students must also demonstrate proficiency in basic techniques of weightlifting and body conditioning. This may be done by completion of a course in the subject, appropriate certification by a nationally recognized organization (e.g., NSCA), or proof of at least one year of practical experience in the field.

Applicants who meet the general matriculation requirements of the college may be accepted for matriculation conditionally. A graduate student may meet such matriculation conditions by completing appropriate courses in the Brooklyn College undergraduate division.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Degree requirements

Thirty-six credits are required for the degree.

All students must complete the following foundational courses:

Kinesiology 7000X Research Methods and Design
Kinesiology 7059X Advanced Physiology of Exercise
Kinesiology 7154X Sport and Exercise Psychology
Kinesiology 7263X Biomechanics

All newly admitted graduate students in any program should ensure that Kinesiology 7000X Research Methods and Design is taken in their first semester of enrollment.

Exercise Science and Rehabilitation

Students selecting the track in Exercise Science and Rehabilitation are required to complete the following plus 2 additional 7000-level courses in the Department provided they have met the appropriate prerequisites (other courses may be taken with the approval of the Graduate Deputy or Chairperson):

Kinesiology 7250X Fitness Assessment and Exercise Prescription
Kinesiology 7260X Exercise Prescription for Special Populations
Kinesiology 7262X Electrocardiography #
Kinesiology 7267X Cardiopulmonary Rehabilitation @
Kinesiology 7279X Nutrition and Exercise
Kinesiology 7290X Internship in Exercise Science and Rehabilitation

Kinesiology 7262X should be taken in first semester of matriculation
@ Kinesiology 7267X should be taken in second semester of matriculation

Students who have successfully completed an undergraduate course in Exercise Testing and Prescription may take an additional elective in place of Kinesiology 7250X. Students matriculating in this track must have a current CPR certification prior to graduation at a level equivalent to American Safety and Health Institute CPR Pro for the Professional Rescuer.

Sport Science

Students selecting the track in Sport Science must take the following courses:

Kinesiology 7100X Technology in Kinesiology

Kinesiology 7250X Fitness Assessment and Exercise Prescription
Kinesiology 7364X Biomechanics of Sport Performance
Kinesiology 7365X Biomechanics of Orthopedic Injury
Kinesiology 7370X Research Seminar in Sport Science

Students in either track may select additional credits from any 7000 level course offered by the Department of Kinesiology to fulfill the 36-credit requirement provided they have met the appropriate prerequisites. Other elective courses may be selected with the approval of the Graduate Deputy or Department Chair.

M.S. degree program in sport management
HEGIS code 0835; SED program code 83153

The Master of Science degree in Sport Management produces graduates with skills and knowledge for professional careers in the multi-billion dollar sports business industry. Students will receive advanced preparation in numerous areas such as management, marketing, financial, media, promotions, public relations, communications, sports information, retail and manufacturing, coaching, school/university-based programs and legal/risk management. Students may find employment following completion of the program in areas such as sports media, sports facilities and arenas, sports retail business, sport product manufacturing, sport club management, entrepreneurial enterprising, amateur and community sports enterprises, professional sports, sports travel and tourism, international sport management, college sports, and athlete representation and management.

Matriculation requirements

This program is designed for students with an undergraduate degree in sport management and experiences in the sport business industry. Students lacking such academic preparation and experiences will be required to take prerequisite courses. For students in this category, completion of any prerequisites required by the graduate deputy must be accomplished prior to beginning the third semester of enrollment in the program. These may include undergraduate business management, marketing and budgeting/finance/accounting/economic courses. Other courses may also be included as necessary.
Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Degree requirements

Thirty-six credits are required for the degree. All newly admitted graduate students in any program should ensure that Kinesiology 7000X Research Methods and Design is taken in their first semester of enrollment.

Students must complete the following courses:

Kinesiology 7000X Research Methods and Design
Kinesiology 7044X Risk Management and Legal Issues in Sport
Kinesiology 7342X Business Management of Community/Club Sports and Recreation
Kinesiology 7455X Administration of Interscholastic and Intercollegiate Sport
Kinesiology 7460X Budgeting and Finance in Sports and Recreation
Kinesiology 7470X Sport Marketing
Kinesiology 7480X Global Sport: Olympic/Paralympic Movements and Sport Governance

Students may select 15 credits from any 7000 level course offered by the Department of Kinesiology. Other elective courses may be selected with the approval of the Graduate Deputy or Department Chair.

Courses

To register for courses numbered 7000 and higher, students who offer fewer than 12 undergraduate credits in physical education must have permission of the deputy chairperson before registration.

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

KINS 7000X Research Methods and Design in Kinesiology

45 hours; 3 credits
This should be the first course in which the newly admitted graduate student in the Department of Kinesiology should enroll. Common research methodologies and designs are explored. Quantitative and qualitative research methodologies/designs and statistical applications are covered in order to ensure that the student can effectively comprehend and interpret research in the field and with further preparation conduct their own research. Cannot be taken by students who successfully completed PEES 7092X

KINS 7043X Applications of Exercise and Fitness Theory

45 hours; 3 credits
Examination of exercise theory, psychological aspects of physical

activity, and current fitness trends. Application of theory to the development and implementation of fitness programs in industrial, commercial, and educational settings.

KINS 7044X Risk Management and Legal Issues in Sport

45 hours; 3 credits
Risk management and legal concepts and their application to sports are covered. Common issues of risk management in sport programs are explored to protect the business, the employees and the participants. Consideration of constitutional requirements, tort, contract and commercial laws as they relate to the sports professional and participant are presented. Special topics highlighting such developing law as product liability, worker's compensation, and Titles VII and IX are included. (Not open to students who are enrolled in or have completed Physical Education 766X.)

KINS 7059X Advanced Physiology of Exercise

15 hours lecture, 30 hours laboratory; 3 credits
Effects of exercise on humans. Selected topics in circulation, respiration, muscle physiology, thermoregulation, energy metabolism.

KINS 7080X Thesis Research

Hours to be arranged; 3 credits
Research for master's thesis supervised by a faculty member. Credit is not earned until the thesis is accepted. Students register for this course only once.

Prerequisite: permission of the chairperson.

KINS 7100X Technology in Kinesiology

45 hours; 3 credits
Students will receive in-depth training in various digital technologies commonly used in kinesiology. Training and extensive use of assorted software, digital video, digital photography and other such digital instrumentation will be provided.

KINS 7110X Group Dynamics in Sport and Physical Education

45 hours; 3 credits
This course will acquaint students with theory and practice related to group behavior in sport, educational and community settings. Students in this course will be provided with a theoretical understanding of group processes and will understand group development stages, decision-making processes, and leadership, relevant to sport, physical education and community organizations.

KINS 7149X Advanced Instructional Strategies for Physical Education

45 hours; 3 credits
Development of advanced skills in physical education pedagogy. Strategic class management and motivation skills based on current pedagogical research.

Prerequisite: an introductory theory course in instructional strategies in physical education (K-12) or permission of the chairperson.

KINS 7150X Physical Education and Athletics in Education and Society

45 hours; 3 credits
Historical and philosophical study of physical education and athletics in education and society.

KINS 7151X Motor Development and Analysis

45 hours; 3 credits
Theoretical perspectives in motor development; principles of motion and stability; physical growth and aging; development of motor skills across the life span; perceptual-motor development; functional constraints to motor development; interaction of exercise and structural constraints; effects of practice regimens and feedback, and the theoretical perspectives relevant to motor development research. Students in this course will learn, examine and analyze the theories and principles that relate to skillful movement, physical activity, and fitness in one's life.

Prerequisite: none

KINS 7153X Sociology of Sport

45 hours; 3 credits
Sport in American society. Sport in relation to education, leisure, social stratification, social mobility, race, sex. Socioeconomic dimensions of sport. Literature on the sociology of sport.

The influence of sport in American society and culture is discussed. Sport is explored in relation to education, leisure, social stratification, social mobility, race, and gender. Socioeconomic dimensions of sport are investigated.

KINS 7154X Sport and Exercise Psychology

45 hours; 3 credits
The influence of psychological factors on an athlete's sport performance or a person's exercise performance are presented. Factors influencing the relationship of sport to personality; personality theories; the coach-player relationship; minority groups in sport; aggression; personality characteristics of athletes competing in various sports etc. are explored.

KINS 7156T Supervision in Physical Education

45 hours; 3 credits
Techniques of supervision in junior and senior high school settings are covered. Attention to in-service training of personnel; relations with principals, administrators, and the community is explored.

Prerequisite: a graduate course in physical education/kinesiology and a minimum of a year of teaching experience.

KINS 7157X Physical Education Curriculum in Secondary School

45 hours; 3 credits
Fundamental principles for curriculum development are explored. Sources and criteria for content selection and organization in required classes, atypical classes, intramural sports, and interscholastic athletics for urban and suburban schools are discussed.

KINS 7158X Motor Learning and Human Performance

45 hours; 3 credits
Behavioristic and cognitive theories related to the acquisition of gross motor skills are presented. Application of research findings to the teaching of motor skills is included.

KINS 7159X Developing School-Based Leadership Skills

45 credits; 3 hours
Students will be given opportunities to enhance their leadership skills through a variety of means including reading, lectures, presentations

and interviews. Leadership skill acquisition will assist the student in functioning professionally in the school environment with school leadership, department leadership, their colleagues, students and parents.

KINS 7250X Fitness Assessment and Exercise Prescription

45 hours; 3 credits
Students study advanced processes and procedures of physical fitness evaluation and prescription. Emphasis is placed on the design of individual and group exercise programs.

Prerequisite: PEES/KINS 7059X

KINS 7260X Exercise Prescription for Special Populations

45 hours; 3 credits
Theory of individualized exercise programs for specific populations: cardiovascular, neuromuscularly impaired, diabetic, pediatric, geriatric, dialysis patients.

KINS 7261X Advances in Cardiology

45 hours; 3 credits
Invasive and noninvasive tests which assess cardiovascular function. Topics include cardiac catheterization, radionuclide studies, wall motion studies, echocardiography.

KINS 7262X Electrocardiography

45 hours; 3 credits
Fundamentals of the physiological basis of the electrical activity of the heart. Cardiac rate, rhythm, hypertrophy, axis, infarct, electrolyte abnormalities, and conduction. Evaluation of exercise electrocardiograms of healthy and of diseased hearts.

KINS 7263X Biomechanics

45 hours; 3 credits
The study of human motion and its underlying physical principles. Examination of forces that act on the human body and their effects on muscles, bones, and joints. Applications to physical therapy, rehabilitative medicine, and sports techniques. (Not open to students who are enrolled in or have completed Physics 7030X [690X].)

Prerequisite: a course in kinesiology.

KINS 7267X Cardiopulmonary Rehabilitation

45 hours; 3 credits
Physiological, medical, administrative, and practical guidelines for conducting a comprehensive rehabilitation program for individuals with various cardiopulmonary diseases.

Prerequisite: Physical Education/Kinesiology 7262X [762X].

KINS 7279X Nutrition and Exercise

45 hours; 3 credits
Exploration of human nutritional requirements of exercise; the significance of intermediary metabolic pathways and the effect of dietary manipulation on exercise performance. (This course is the same as Health and Nutrition Sciences 7234X [779X].)

Prerequisite: a college level course in human or animal physiology.

KINS 7290X Internship in Exercise Science and Rehabilitation

15 hours seminar, 90 hours fieldwork; 3 credits
Development of skills in exercise science and rehabilitation in one or more approved settings (hospital, rehabilitation program, college research laboratory) under the direction and supervision of agency personnel and/or a member of the college faculty. Students in the Sport Science track may not enroll in this course. Not open to students who passed PEES/KINS 7265X.

Prerequisite: Completion of PEES/KINS 7250X, PEES/KINS 7260X, and PEES/KINS 7262X.

KINS 7342X Business Management of Community/Club Sports and Recreation

45 hours; 3 credits
Business administration practices as they relate to community/club sports and recreation are covered. Overview of the field of community/club sports and recreation management are presented. Emphasis is on the practical and contemporary aspects of successful management. (This course must be taken before the completion of 12 credits in the program.) (Not open to students who are enrolled in or have completed Physical Education 766X.)

KINS 7345X Sports Management Internship

15 hours seminar, 90 hours fieldwork; 3 credits
Supervised sports management internship experience. Development of competencies in sport management in an approved agency and under the direction and supervision of agency personnel and a member of the college faculty.

Prerequisite: Physical Education/Kinesiology 7342X [742X].

KINS 7364X Advanced Biomechanics of Sports Performance

45 hours; 3 credits
Examination of biomechanical principles associated with sports performance. Investigation of common sport activities and the kinematic and kinetic factors associated with performance.
Prerequisite: a course in biomechanics equivalent to PEES 7263X.

KINS 7365X Advanced Biomechanics of Orthopedic Injury

45 hours; 3 credits
Examination of biomechanical principles associated with causative factors in orthopedic injuries. Investigation of common human activities and the kinematic and kinetic factors associated with injury potential to the musculoskeletal system including activities of daily living, work tasks, sport and exercise.

Prerequisite: a course in biomechanics equivalent to PEES/KINS 7364X.

KINS 7370X Research Seminar in Sport Science

45 hours; 3 credits
Students will review current research in the sport sciences through on-line and library-based sources. Class discussions and presentations will evolve from these activities.

Prerequisite: completion of all required KINS courses - should be taken in the student's final semester of matriculation.

KINS 7455X Administration of Interscholastic and Intercollegiate Sport

45 hours; 3 credits
Coordination of procedures for success in school-based sport programs at the secondary and collegiate level is presented. Programs, budgets, risk management, legal aspects, coaching, training, medical supervision, rehabilitation, recruitment and hiring practices are

explored.

KINS 7460X Budgeting and Finance in Sports and Recreation
45 hours; 3 credits
This course focuses on fiscal and budgetary control of public and private sport organizations, recreation departments, leagues, and facilities. A number of case studies will be presented. Prior knowledge of accounting is beneficial to success in this course.

KINS 7470X Sport Marketing

45 hours; 3 credits
Students will learn about effective marketing strategies employed in successful sport programs including school-based, community-based, national and international organizations/events and professional sport.

KINS 7480X Global Sport: Olympic/Paralympic Movements and Sport Governance
45 hours; 3 credits
An overview course that explores the structure, operation, and role of global sport organizations such as the International Olympic Committee, the International Paralympic Committee, National Olympic/Paralympic Committees and an assortment of international sport governing bodies.

KINS 7990X Directed Readings and Research

15 to 45 hours; 1 to 3 credits
The student works under the advisement of a faculty member in conducting independent research on topics related to their area of study. The student will typically produce an extensive research paper or any other such acceptable product as agreed upon with the faculty adviser to demonstrate their activities over the semester in exploring the agreed upon subject matter.

KINS 7999X Research Seminar in Physical Education

45 hours; 3 credits
Seminar style class with a focus on research practices in exercise/sport science, sports management and physical education in which formal course work is not offered. Independent reading, reports, and/or fieldwork are utilized. Discussion and examinations are conducted in coordination with course instructor. This course is intended to be the culminating experience for the student and should be taken in the student's last semester of enrollment in the program. Cannot be taken by students who passed PEES 7299X.

Mathematics

Department office: 1156 Ingersoll Hall
Phone: 718.951.5246

Full-time Faculty

Professors: Hadjiliadis, Halpern, Hu, Marathe, Mate, Sibner, Velling
Associate Professors: Benes, Chamanara, Clement, Cooley, Hochberg, Kingan, Preston, Suzuki
Assistant Professors: Cui, Pinheiro, Trevino
Lecturer: Gindes

The Mathematics Department offers a distinctive master of arts program in pure and applied mathematics. Students gain experience with current mathematical software and technology, and may study computational mathematics in conjunction with the Computer and Information Science Department. Students who do not wish to pursue university-level teaching and research careers may elect to develop expertise in financial mathematics to obtain the marketable credentials for work in the financial industry. Mathematics Department faculty members develop and conduct high quality research and participate in the mathematics and urban education doctoral programs of The Graduate Center of The City University of New York.

M.A. degree program in mathematics
HEGIS code 1701; SED program code 02063

The Mathematics Department offers a distinctive master of arts program in pure and applied mathematics. Students gain experience with current mathematical software and technology, and may study computational mathematics in conjunction with the Computer and Information Science Department. Students who do not wish to pursue university-level teaching and research careers may elect to develop expertise in financial mathematics to obtain the marketable credentials for work in the financial industry. Mathematics Department faculty develop and conduct high quality research and participate in the mathematics and urban education doctoral programs of The Graduate Center of The City University of New York.

The M.A. program in mathematics is not accepting applications for Fall 2014, Spring 2015 and Fall 2015 admission.

Matriculation requirements

Applicants must offer at least 18 credits in mathematics courses beyond elementary calculus.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Thirty credits are required for the degree.

Students must complete 21 credits in courses in the Mathematics Department. The following courses are required: Mathematics 7514X, 7615X, 7521X or 7620X, and 7622X.

With permission of the deputy chairperson, the remaining credits required for the degree may be in courses in any department.

Students must pass a comprehensive examination or submit a thesis acceptable to the department. Students may submit a thesis only with the approval of the department. Students who receive such approval are required to register for Mathematics 7999X (no credit). Information about requirements for the comprehensive examination and the thesis is in the section "Academic Regulations and Procedures" of the Graduate Bulletin.

Courses in the Mathematics Department offered toward the degree must be 7000-level courses.

The program of study must be approved by the deputy chairperson.

Recommendations

Students should submit the program of study for approval early, before initial registration if possible. The department gives guidance in planning a well-balanced program. Students should acquire a reading knowledge of mathematical French, German, and/or Russian, although no foreign language examination is required.

M.A. degree program in education: mathematics teacher (7-12)
HEGIS code 1701.01; SED program code 26734

The Mathematics Department, in conjunction with the Department of Secondary Education, offers a master of arts degree in education for mathematics teachers (grades 7-12). The New York State Education Department licenses graduates of registered teacher education programs who meet the state requirements for teachers. Applicants must consult matriculation requirements for adolescence education and special subjects in the Department of Secondary Education section of the Bulletin, and should see the chairperson of the Department of Secondary Education for counseling.

The department also participates in a master of science degree program for middle childhood education specialists in math (grades 5-9), with extensions for gifted education at initial and professional certification levels.

The Mathematics Department, in conjunction with the Department of Secondary Education, offers a master of arts degree in education for mathematics teachers (grades 7-12).

This program leads to the M.A. in Education and both New York State Initial and Professional Certification in Adolescence Education in teaching mathematics for grades 7-12.

Matriculation requirements

Applicants must have an undergraduate degree in mathematics, mathematics education grades 7-12, or 18 credits in advanced mathematics including the following: multivariable calculus, linear algebra, abstract algebra, geometry, analysis/advanced calculus, probability and statistics, as approved by the chairperson of the mathematics department and the advisor of the mathematics education (7-12) program. Prospective students who do not hold Initial Certification are recommended to begin the program in the spring semester.

Applicants must have a minimum undergraduate grade point average of 3.00 for matriculation. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of at least 500 on the paper-based test, or 173 on the computer-based test, or 61 on the internet-based test before being considered for admission.

Applicants who do not meet all of the specific requirements will be given individual consideration and may be admitted with conditions, with the approval of the chairperson of the Secondary Education Department and the chairperson of the Mathematics Department.

Applicants must consult matriculation requirements for adolescence education and special subjects in the School of Education section of the Bulletin, and should see the Department of Secondary Education for advisement. General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission".

Degree requirements

For students who hold New York State certification in mathematics (7-12), thirty credits are required for the degree. For students without New York State certification in mathematics (7-12), thirty to forty-five credits are required for the degree. Students must complete the following education courses in the stated sequence: SEED 7462X, SEED 7463X, SEED 7544T, SEED 7464T. All required education courses and some education electives require permission for registration as indicated in the Schedule of Courses.

Option A: 30 credits

This option leads to New York State Professional Certification in Adolescence Education in teaching mathematics for grades 7-12.

Matriculation requirements

Applicants must hold a New York State Initial Certification in Adolescence Education in teaching mathematics for grades 7-12.

Degree requirements

Thirty credits are required for the degree.

The following mathematics education courses, or mathematics education courses approved by the program adviser, are required:
SEED 7461T, SEED 7462T, SEED 7463T, SEED 7544T, and SEED 7464T.

The following mathematics courses, or mathematics courses approved by the mathematics department chair or designee, are required:
MATH 7305T, MATH 7307T, MATH 7309T or MATH 7311T.

One of the following elective education courses, or an education course approved by the program adviser, is required: SEED 7465X, SEED 7472X, SEED 7502T, SEED 7503X, or SEED 7671X.

Option B: 30-45 credits

This option, for students without certification to teach, leads to both New York State Initial and Professional Certification in Adolescence Education in teaching mathematics for grades 7-12.

It is recommended that applicants to this Option begin their program in a Spring semester.

Degree requirements

Thirty to forty-five credits are required for the degree.

This option leads to both New York State Initial and Professional Certification in in Adolescence Education in teaching mathematics for grades 7-12.

The following four education courses are required unless candidates have taken one or more as part of previous coursework. Foundations: SEED 7500X, SEED 7501X; Special Education: SEED 7671X, and Literacy: SEED 7503X.

The following two student teaching courses are required unless candidates have a New York State waiver: SEED 7538T, and SEED 7539T. (SEED 7500X and SEED 7501X must be completed before student teaching).

The following mathematics education courses, or mathematics education courses approved by the program adviser, are required: SEED 7461T, SEED 7462T, SEED 7463T, SEED 7544T, and SEED 7464T.

The following mathematics courses, or mathematics courses approved by the mathematics department chair or designee, are required: MATH 7305T, MATH 7307T, MATH 7309T or MATH 7311T.

Option C: 30-39 credits

This option leads to both New York State Initial and Professional Certification in in Adolescence Education in teaching mathematics for grades 7-12.

Matriculation Requirements:

Applicants must hold a New York State Transitional B Certificate in Adolescence Education in teaching mathematics for grades 7-12.

Degree requirements:

Thirty to thirty-nine credits are required for the degree.

The following courses in education are required unless candidates have taken one or more as part of previous coursework: SEED 7500X, SEED 7501X, SEED 7503X, and SEED 7671X.

The following mathematics education courses, or mathematics education courses approved by the program adviser, are required: SEED 7461T, SEED 7462T, SEED 7463T, SEED 7544T, and SEED 7464T.

The following mathematics courses, or mathematics courses approved by the mathematics department chair or designee, are required: MATH 7305T, MATH 7307T, MATH 7309T or MATH 7311T.

CUNY Ph.D.

The City University of New York offers a doctoral program in mathematics. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Mathematics Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Mathematics Department and the executive officer of the doctoral program.

Honor Society

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

Courses

Unless a prerequisite is specific, a student may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

At present, the program is small and many courses are offered as tutorials. Each semester students are consulted in the process of selecting the courses to be offered in the next semester.

Courses offered toward a master of arts degree in mathematics must be 7000-level courses.

MATH 6140T Middle School Mathematics from an Advanced Standpoint
45 hours; 3 credits
Traditional material in arithmetic, algebra, geometry, and other fields treated from a modern viewpoint. This course may not be counted toward the 12 credits required in mathematics in the program for Middle School Teachers.

Prerequisite: permission of the deputy chairperson.

MATH 6652X Topics in Probability Theory and Statistics
45 hours; 3 credits
Set theory, counting arguments, functions, review of infinite series, sample spaces and probability spaces, conditional probability and independence, discrete and continuous random variables and their distribution functions, joint distributions, expected values and moments, Chebyshev's inequalities, the law of large numbers, central limit theorem, applications to sampling theory and testing of hypotheses, confidence intervals, introduction to correlation, and regression analysis.

Prerequisite: Mathematics 7280X [607X] or a year of calculus or permission of the chairperson.

MATH 7141T Number Systems and Algebra for Childhood Teachers
45 hours; 3 credits
The real number system and some of its subsystems. Introduction to group and field structures, solutions to equations. Number theory. Sequences and patterns, and problem solving. Technology as a tool for investigating algebra. Connections to curriculum and pedagogy. This course may not be offered toward master of arts degrees in secondary education or in middle childhood education.

Prerequisite: A course in mathematics for elementary school teachers, or a mathematics course approved by the deputy chairperson.

MATH 7142T Geometry for Childhood Teachers
45 hours; 3 credits
Investigation of two- and three-dimensional objects and their properties. Congruence and similarity. Coordinate geometry. Transformations in the plane, and their geometric and algebraic properties and similarity. Measurement of length, area, volume, surface area. Inductive and deductive proof in geometry. Connections or geometry to the arts and everyday applications. Technology as a tool for investigating geometry. Connections to curriculum and pedagogy. This course may not be offered toward a master of arts degree in secondary education or in middle childhood education.

A course in mathematics for elementary school teachers, or a mathematics course approved by the deputy chairperson.

MATH 7143T Probability and Statistics for Childhood Teachers
45 hours; 3 credits
Set and graphical representations, counting principle, sample spaces and probability. Measures of central tendency and variability, binomial and normal distributions. Applications to sampling theory and testing of hypotheses; introduction to correlation and regression; applications to research in education. Use of graphing calculator and databases on the Internet for exploring probability and statistics. Connections to curriculum and pedagogy. This course may not be offered toward master of arts degrees in secondary education or in middle childhood education.

Prerequisite: A course in mathematics for elementary school teachers, or a mathematics course approved by the deputy chairperson.

MATH 7144T History of Mathematics for Childhood Teachers
45 hours; 3 credits
A study of historical and cultural perspectives of mathematics. Mathematical problem solving. Origins of number systems and number theory, algebra and topics in geometry, probability, and calculus. Famous men and women in mathematics. Video and Internet resources for exploring the history of mathematics. Connections to curriculum and pedagogy. This course may not be offered toward master of arts degrees in secondary education or in middle school education.

Prerequisite: Mathematics 7141T [604.1T] or 7142T [604.2T] or their equivalents.

MATH 7145T Discrete Mathematics for Childhood Teachers
45 hours; 3 credits
Selected mathematical topics and modeling in the social sciences. Networks, Euler paths; sets, classification, and the counting principle; matrices; linear programming. Mathematics of voting. Technology as a tool for investigating discrete mathematics. Connections to curriculum and pedagogy. This course may not be taken after Mathematics 7273T [606.1], nor may it be offered toward master of arts degrees in secondary education or in middle school education.

MATH 7146T Introduction to Functions and Applications for Childhood Teachers
45 hours; 3 credits
Analysis of the function concept and its unifying role in mathematics. Elementary algebraic and transcendental functions. Functions as mathematical models in the physical and social sciences. Use of technology to investigate functions, their properties, and applications. Connections to curriculum and pedagogy. This course may not be offered toward master of arts degrees in secondary education or in middle school education.

Prerequisite: Mathematics 7141T [604.1] or its equivalent, and permission of the deputy chairperson.

MATH 7271T Problem Seminar in Middle School Mathematics
45 hours each term; 3 credits each term
Problem solving, discussion and reports on topics in middle school mathematics. Term paper or final examination. May not be taken after Mathematics 7315X [705X]

MATH 7272T Problem Seminar in Secondary School Mathematics
45 hours each term; 3 credits each term
Problem solving, discussion, and reports on topics in secondary school mathematics. Term paper or final examination.

MATH 7273T Concepts of Middle School Mathematics I: Discrete Mathematics
45 hours; 3 credits
Topics include graph theory, voting theory, combinatorial mathematics, logic and set theory. Emphasis on aspects found in the New York State mandated middle school mathematics sequence. May not be taken after Mathematics 7000-level courses.

Prerequisite: permission of the deputy chairperson.

MATH 7274T Concepts of Middle School Mathematics II: Geometry
45 hours; 3 credits
Foundations and basic ideas of geometry and their relation to the middle school curriculum. May not be taken after Mathematics 7531X [731.1X].

Prerequisite: Permission of the deputy chairperson

MATH 7275T Concepts of Middle School Mathematics III: Modern Algebra
45 hours; 3 credits
The Euclidean Algorithm, prime numbers, the Fundamental Theorem of Arithmetic, and a selection of topics such as: rational, irrational, real and complex numbers, numeration in bases other than ten, algebraic properties of systems such as the integers modulo n, infinite sets. May not be taken after Mathematics 7520X [720.2X], Mathematics 7620X [720.4X], or Mathematics 7517X [717X].

Prerequisite: Permission of the deputy chairperson.

MATH 7276T Concepts of Middle School Mathematics IV: Probability Theory and Statistics
45 hours; 3 credits
Set theory, counting arguments, functions, sample spaces and probability spaces, conditional probability and independence, discrete random variables and their distribution functions, joint distributions, expected values and moments. The law of large numbers, central limit theorem, applications to sampling theory and testing of hypotheses, confidence intervals, introduction to correlation, and regression analysis. Not open to students who have completed Mathematics 6652X [652X].

Prerequisite: Permission of the deputy chairperson.

MATH 7277T History of Mathematics for Middle School Teachers
45 hours; 3 credits
This course examines topics in middle school mathematics from a historical and cultural perspective. Topics include the development of different systems of numeration and computation; number theory; the development of problem-solving methods and algebra; geometry; probability; contributions of non-European cultures; and other topics as time permits. (May not be taken after Mathematics 7541X [741X].)

Prerequisite: Mathematics 7274T [606.2T] or Mathematics 7275T [606.3T] or permission of the deputy chairperson.

MATH 7278T Applied Number Theory for Middle School Mathematics
45 hours; 3 credits
Introduction to number theory and its applications. Figurate numbers; Fibonacci, Lucas, and Fermat numbers; Diophantine equations; linear and multilinear congruences; factoring algorithms; theorems of Fermat, Euler, and Wilson. Applications to cryptology and other areas.

Prerequisite: Permission of graduate deputy or chair.

MATH 7283T Calculus I
45 hours; 3 credits
Limits and continuity; techniques and applications of differentiation, including the calculus of trigonometric functions. The definite integral and antiderivatives. This course may not be counted toward the 12 credits required in mathematics in the program for Middle School Teachers.

Prerequisite: Mathematics 7146T [604.6T] or permission of the deputy chairperson.

MATH 7286T Calculus II
45 hours; 3 credits
Calculus of exponential and logarithmic functions. Techniques of integration. Applications of integration. Infinite sequences and series. Parametric curves. This course may not be counted toward the 12 credits required in mathematics in the program for Middle School Teachers.

Prerequisite: Mathematics 7283T [608.1T] or permission of the deputy chairperson.

MATH 7302X Foundations of Secondary School Mathematics Curricula II
30 hours plus independent work and conference; 3 credits
Logic; groups; fields; axiomatic affine geometry; the real number system; statistics.

Prerequisite: Mathematics 7301X [701.1X].

MATH 7305T High School Mathematics from an Advanced Standpoint
4 hours; 4 credits
Examination of the foundations of high school algebra, geometry and number theory. Justification of algorithms and procedures. Analysis of common, fundamental errors and misconceptions. Strategies and tactics for instruction and remediation. This course may not count towards a master of arts degree in mathematics.

Prerequisite: Acceptance into the Master's Degree in 7-12 Mathematics Education or permission of the Chair of the Mathematics Department.

MATH 7307T Geometry for High School Mathematics Teachers
4 hours; 4 credits
The course is organized around two main themes: Some Theorems and Applications in "Modern" Euclidean Geometry and Geometric Transformations and their applications. There will be an emphasis on the role of (1) conjecture and proof and (2) proofs using synthetic methods, trigonometric methods, area methods, coordinate methods, and transformational methods. Finally, in addition to Euclidean geometry, students study the basic ideas of spherical geometry. Geometer's Sketchpad or some other dynamic geometry software will be used extensively to explore geometric relationships. This course may not be taken towards a master of arts degree in mathematics.

Prerequisite: Acceptance into the Master's Degree in 7-12 Mathematics

Education or permission of the Chair of the Mathematics Department.

MATH 7309T Theory of Functions for High School Mathematics Teachers
4 hours; 4 credits
This course is centered around topics in theory of functions that are related to topics taught in high school mathematics, but at an advanced, conceptual level. Students will examine functions using formal, rigorous approaches, as well as a geometric, transformational examinations. Technology, such as a graphing calculator, will be used extensively. This course may not count towards a master of arts degree in mathematics.

Prerequisites: Math 4201 [11.1] or its equivalent. Acceptance into the MA program in Adolescent Mathematics Education or permission of the Chair.

MATH 7311T Teaching of Advanced Placement Calculus AB & BC
4 hours; 4 credits
This course is designed to prepare AP calculus teachers to help develop their students' understanding of calculus concepts, methods and applications. This course will involve both the study of calculus and the teaching methods of calculus, using a multi-representational approach. Participants are expected to have completed Calculus III with success and therefore, this course will focus on deeper understandings and will assume that participants are familiar with the basic introductory calculus ideas. Participants are also expected to have command of a graphing calculator. We will examine calculus concepts graphically, numerically, analytically and verbally. Both the AB and BC AP calculus exams will be investigated and problems will be solved using multiple approaches. This course may not count towards a master of arts degree in mathematics.

Prerequisite: Math 4201 [11.1] or its equivalent

MATH 7315X Mathematical Problem-Solving in a Computer-Assisted Environment
30 hours; 2 credits
Mathematical problem-solving, particularly related to applications requiring intensive calculation or visualization using sophisticated "computer algebra" systems and graphing calculators. Students will work in small teams on problems drawn from calculus and more advanced undergraduate mathematics courses.

Prerequisite: Matriculation in the M.A., mathematics teacher (7-12), program.

MATH 7318X Introduction to the Theory of Sets

45 hours plus independent work and conference; 4 credits
Algebra of sets. Order. Cardinal and ordinal numbers and their arithmetics. Informal axiomatic mathematics. Informal axiomatic set theory.

MATH 7514X Theory of Functions I

45 hours plus independent work and conference; 4 credits
Unified treatment of functions over the real and complex domains, including limits, continuity, derivatives, integrals. (Not open to students who have completed Mathematics 7514X [714.1G].)

MATH 7517X Theory of Numbers

45 hours plus independent work and conference; 4 credits
Theory of rational integers, including Diophantine equations, primitive roots, quadratic residues. Theory of algebraic integers of particular quadratic domains. Theory of general algebraic number fields and their integral domains.

MATH 7520X Modern Algebra I

45 hours plus independent work and conference; 4 credits
Topics from group theory, number theory, linear algebra, field theory.

MATH 7526X Vector Spaces and Matrices

45 hours plus independent work and conference; 4 credits
Introduction to the theory of linear vector spaces of finite dimensions with applications to algebra and geometry. Linear dependence, linear subspaces, dimensions, linear transformations, systems of linear equations, matrices, bilinear and quadratic forms, inner products, orthogonality, Euclidean spaces, orthogonal and unitary equivalences.

MATH 7531X Geometrical Transformations

45 hours plus independent work and conference; 4 credits
Determination and classification of transformations. Invariants. Groups of transformations in Euclidean, affine, inversive, and projective planes and spaces.

MATH 7541X History of Mathematical Ideas

45 hours plus independent work and conference; 4 credits
Development of important mathematical concepts in historical and cultural contexts.

MATH 7552X Introduction to Probability and Statistics

45 hours plus independent work and conference; 4 credits
Boolean algebra. Bayes's theorem. Law of large numbers. Discrete and continuous distributions. Regression and correlation. Sampling theory and the testing of statistical hypotheses.

MATH 7580X Social Software and Social Algorithms

37½ hours plus conference and independent work; 3 credits
A comprehensive introduction to the mathematical and logical techniques relevant to understanding the structure of social algorithms (social software). The study of social institutions, including electoral systems, using techniques from mathematics and computer science, including probability, game theory, and logic. (This course is the same as Computer and Information Science 7422X [712X].)

Prerequisite: Mathematics 7273T [606.1T] or its equivalent

MATH 7615X Theory of Functions II

45 hours plus independent work and conference; 4 credits
Cauchy's integral formulas; Taylor and Laurent series; properties of analytic functions; singularities and residues; conformal mapping; analytic continuation; entire functions. (Not open to students who have completed Mathematics 7615X [715.1G].)

Prerequisite: Mathematics [714.1G] or 7514X [714.1X] or the equivalent.

MATH 7620X Modern Algebra II

45 hours plus independent work and conference; 4 credits
A continuation of Mathematics 7520X [720.2X].

Prerequisite: Mathematics 7520X [720.2X] or permission of the chairperson.

MATH 7622X Point Set Topology

45 hours plus independent work and conference; 4 credits
Theory of sets and of the standard properties of metric and topological spaces. (Not open to students who have completed Mathematics 7622X [722G].)

MATH 7910X Independent Study

Hours to be arranged; 1 credit each term
Independent study of selected reading approved by a faculty adviser. Term paper or final examination.

MATH 7920X Independent Study

Hours to be arranged; 1 credit each term
Independent study of selected reading approved by a faculty adviser. Term paper or final examination.

MATH 7930X Independent Study

Hours to be arranged; 1 credit each term
Independent study of selected reading approved by a faculty adviser. Term paper or final examination.

MATH 7999X Thesis Research

Hours to be arranged; no credit
Research for master's thesis supervised by a faculty member. Students register for this course only once.

Prerequisite: 20 credits in approved courses and permission of the instructor.

The following inactive course(s) will only be offered if there is sufficient demand:

MATH 7301X Foundations of Secondary School Mathematics Curricula I

MATH 7303X Foundations of Secondary School Mathematics Curricula III

MATH 7521X Introduction to Field Theory

MATH 7560X Introduction to Mathematical Logic

Modern Languages and Literatures

Department office: 4239 Boylan Hall
Phone: 718.951.5451

Full-time Faculty

Professors: Bonaffini, Filer, Girelli-Carasi, Gould, Huffman, Llanos Mardones, Mbom, Renner
Associate Professors: Chang, Childers
Assistant Professors: Alonso, Huang

The Department of Modern Languages and Literatures is known for its commitment to the highest standards of academic excellence and a distinguished staff of experts in many languages. The department offers students the opportunity to experience the intellectual and personal enrichment that comes with deeper knowledge of the foreign language selected and the diverse cultures with which that language is associated. The department has a Computer Language Instruction Center (CLIC), a state-of-the-art facility with a computer laboratory with specialized software multimedia room and teaching laboratory. CLIC also offers an extensive library of French and Spanish videotapes and audiocassettes. With the department's assets and international students in attendance, you enjoy a truly sophisticated and cosmopolitan atmosphere in which to learn.

M.A. degree program in French
HEGIS code 1102; SED program code 02026

Students in the M.A. in French program acquire a solid foundation in the literature and culture of the Francophone world. They become adept at various modes of textual analysis, and learn to approach literary works in ways that show their continued vitality and relevance. Coursework also includes advanced grammar and stylistics and research methods. This combination prepares students either for employment in middle and high school language departments or for further study at the doctoral level.

Matriculation requirements

Applicants must offer at least 18 credits in advanced courses in French.
General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty to 42 credits are required for the degree.

Students must pass a written and oral comprehensive examination or complete both (a) and (b):

(a) complete 12 credits of course work in addition to the credits otherwise required;
(b) and write a substantial research paper, in French, acceptable to the department.

Information about requirements for the comprehensive examination is in the section "Academic Regulations and Procedures."

Courses in the Modern Languages and Literatures Department offered toward the degree must be 7000-level courses.

The program of study must be approved by the department.

Students must complete a minimum of 30 credits in courses in French. The following courses are required: French 7170X and 7010X.

The program of study must be approved by the department.

M.A. degree program in Spanish
HEGIS code 1105; SED program code 02035

Students in the M.A. in Spanish program acquire a solid foundation in the literature and culture of the Spanish-speaking world. They become adept at various modes of textual analysis, and learn to approach literary works in ways that show their continued vitality and relevance. Coursework also includes advanced grammar and stylistics and research methods. This combination prepares students either for employment in middle and high school language departments or for further study at the doctoral level.

Matriculation requirements

Applicants must offer at least 18 credits in advanced courses.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty credits are required for the degree.

Students must pass a written and oral comprehensive examination and complete a substantial research paper, in Spanish, acceptable to the department. They may take the comprehensive examination beginning in the semester in which they will have earned 18 credits. The writing of the thesis may take place during a one-credit tutorial, Spanish 7790G, to be taken as the final course of the student's program. Spanish 7990X, however, is not required for the degree.

Information about requirements for the comprehensive examination is in the section "Academic Regulations and Procedures."

Courses in the Modern Languages and literatures Department offered toward the degree must be 7000-level courses.

The program of study must be approved by the department. The following courses are required: Spanish 7170X, 7010X, a course in Peninsular Spanish literature, a course in Latin American Literature, and either Spanish 7610X or Spanish 7620X.
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M.A. degree program in education: French teacher (7-12) HEGIS code 1102.01; SED program code 26797

The Department of Modern Languages and Literature in conjunction with the Department of Secondary Education, offers a master of arts degree in education for French teachers (grades 7-12). The New York State Education Department licenses graduates of registered teacher education programs who meet the state requirements for teachers. All students should consult with the Department of Secondary Education for current requirements.

This master of arts program provides students with an introduction to the French/Francophone literature. At the same time, the focus on language and culture fully prepares students for employment as foreign language teachers at the middle and high school levels.

Coursework is divided between the Department of Modern Languages and Literatures (six courses) and the Department of Secondary Education. The courses required by the Department of Secondary Education vary depending on the entry qualifications of students. The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change.

Matriculation requirements

Applicants must offer at least 18 credits in advanced courses in French.
Applicants must also offer (a) or (b):
(a) New York State Initial Certification in French teacher grades 7-12 or courses in education that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching French in grades 7-12; 100 hours of fieldwork; 40 full days or 300 hours of student teaching of French in grades 7-12; or one year of full-time teaching French at appropriate grade levels, and passage of edTPA.
(b) an undergraduate degree with a major in French or appropriate course work in French.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of at least 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the chairperson of the Department of Secondary Education and the chairperson of the Department of Modern Languages and Literatures.
General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty to forty six credits are required for the degree.
Students must complete requirements in French as follows:
French 7010X; 7510X or 7520X; Students must pass a written and oral comprehensive examination or complete both (a) and (b):
(a) complete 12 credits of course work in addition to the credits otherwise required;
(b) and write a substantial research paper, in French, acceptable to the Department of Modern Languages and Literatures.

Information about the comprehensive examination is in the section "Academic Regulations and Procedures."

Courses in the Modern Languages and Literatures Department and the School of Education offered toward the degree must be 7000-level courses. The program of study must be approved early in the first semester by the chairperson or deputy chairperson of the Modern Languages and Literatures Department and the chairperson of the Department of Secondary Education.

Students enroll in the appropriate education courses listed below (Option A or B) based upon teaching experience, previous course work, and the teaching certificates they hold.

Option (A): 30 credits
Students who possess Initial Certification in teaching French or the equivalent must complete the following courses in Secondary Education: SEED 7502T, SEED 7510T, SEED 7548X, and SEED 7523T.

Option (B) 30-46 credits
Students who do not possess Initial Certification in teaching French or the equivalent must, depending on their previous coursework, complete some or all of the following courses in Secondary Education: SEED 7500X, SEED 7501X, SEED 7534T, SEED 7542T, SEED 7516T, SEED 7543T, SEED 7671X, SEED 7502T, SEED 7548X and SEED 7523T.

M.A. degree program in education: Spanish teacher (7-12)
HEGIS code 1105.01; SED program code 26800

The Department of Modern Languages and Literature in conjunction with the Department of Secondary Education, offers a master of arts degree in education for Spanish teachers (grades 7-12). The New York State Education Department licenses graduates of registered teacher education programs who meet the state requirements for teachers. All students should consult with the Department of Secondary Education for current requirements.

This master of arts program provides students with an introduction to the Peninsular/Latin American literature. At the same time, the focus on language and culture fully prepares students for employment as foreign language teachers at the middle and high school levels.

Coursework is divided between the Department of Modern Languages and Literatures (six courses) and the Department of Secondary Education. The courses required by the Department of Secondary Education vary depending on the entry qualifications of students.

The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the School of Education for the current requirements.

Matriculation requirements

Applicants must offer at least 18 credits in advanced courses in Spanish.

Applicants must also offer (a) or (b):

(a) New York State Initial Certification in teaching Spanish grades 7-12 or
courses in education that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching Spanish in grades 7-12; 100 hours of fieldwork; 40 full days or 300 hours of student teaching of Spanish in grades 7-12; or one year of full-time teaching Spanish at appropriate grade levels, and passage of edTPA.

(b) an undergraduate degree with a major in Spanish or appropriate course work in Spanish.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of at least 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the chairperson of the Department of Secondary Education and the chairperson of the Department of Modern Languages and Literatures.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

30-46 credits are required for the degree.

Students must complete requirements in Spanish as follows:

Spanish 7010X; 7510X or 7520X; a course in American literature; and a course in Peninsular Spanish literature. Students must pass a written and oral comprehensive examination and complete a substantial final project, which may take the form of a thesis in Spanish, or may consist of a "teaching unit" completed under the co-direction of the Department of Modern Language and Literatures and the School of Education. Students may take the comprehensive examination beginning in the semester in which they will have earned 18 credits. The writing of the thesis or completion of the teaching unit will take place during a one credit tutorial, Spanish 7790X, to be taken as the final course of the student's program. Spanish 7790X, however, is not a required course for the degree. Information about the comprehensive examination is in the section "Academic Regulations and Procedures."

Students enroll in the appropriate education courses listed below (Option A or B) based upon teaching experience, previous course work, and the teaching certificates they hold.

Option (A): 30 credits

Students who possess Initial Certification in teaching Spanish or the equivalent must complete the following courses in Secondary Education: SEED 7502T, SEED 7510T, SEED 7548X, and SEED 7523T.

Option (B) 33-46 credits

Students who do not possess Initial Certification in teaching Spanish or the equivalent must complete, depending on previous course work some or all of the following courses in Secondary Education: SEED 7500X, SEED 7501X, SEED 7534T, SEED 7542T, SEED 7516T, SEED 7543T, SEED 7671X, SEED 7502T, SEED 7548X and SEED 7523T.

Courses in the Modern Languages and Literatures Department and the School of Education offered toward the degree must be 7000-level courses. The program of study must be approved early in the first semester by the chairperson or deputy chairperson of the Modern Languages and the Department of Secondary Education.

CUNY Ph.D.

The City University of New York offers a doctoral program in French and Spanish. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Modern Languages and Literatures Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Modern Languages and Literatures Department and the executive officer of the doctoral program.

Courses

French

FREN 7010X Grammar and Syntax

30 hours plus conference; 3 credits
Study of linguistic and syntactic patterns with some attention to the historical development of the language. Intensive practice in the written and spoken language.

FREN 7110X Writing and Stylistics

45 hours; 3 credits
Continued practice in French grammar, written expression, stylistics and textual analysis; compositions modeled on selected literary texts.

FREN 7160X Explicating French Literary Works

45 hours; 3 credits
An analysis of major works that are often taught in secondary school curricula, with special attention to developing literary critical perspectives.

FREN 7170X Introduction to Literary Research

30 hours plus conference; 3 credits
Introduction to bibliographic sources, research materials, and the mechanics of documentation. Principles of literary theory and criticism. Presentation of a written paper.

FREN 7210X Translation

30 hours plus conference; 3 credits
French-English and English-French translation of short texts from a variety of fields and styles. Analysis of structures and idioms in both languages.

FREN 7310X History of the French Language

30 hours plus conference; 3 credits
Evolution of French from Latin. Phonology, morphology, syntax, semantics. This course is conducted in English.

Prerequisite: one year of college Latin or the equivalent.

FREN 7510X Culture of France

30 hours plus conference; 3 credits
Aspects of contemporary French civilization and culture and their relations to historical and geographical influences. Perceptions and values as expressed in the arts as well as in the political and social institutions.

FREN 7520X Francophone Cultures

30 hours plus conference; 3 credits
Francophone cultures of Africa, the Caribbean, and Canada. Emphasis on the interplay of French and indigenous values in the areas of

language, education, economy, religion, psychology, and literature. The creation of new cultural identities.

FREN 7610X French Literary Movements and Trends

45 hours; 3 credits
A survey of French literary history. A review of all the major periods in French literature. A study of the appearance and development of literary movements, genres, and trends throughout those periods. Short texts and excerpts will be read as illustrations of the different periods and genres studied.

FREN 7611X French Literature from the Middle Ages

45 hours; 3 credits
Selected masterpieces of French literature from the medieval period, studied within historical and social perspectives

FREN 7612X Studies in Renaissance Literature

30 hours plus conference; 3 credits
Rabelais, Montaigne, Marot and the Lyonese school, La Pleiade.

FREN 7613X Studies in Seventeeth-Century Literature

30 hours plus conference; 3 credits
Theater, poetry, prose.

FREN 7614X Studies in Eighteenth-Century Literature

30 hours plus conference; 3 credits
Prerevolutionary political and social ideas in eighteenth-century literature.

FREN 7615X Studies in Nineteenth-Century Literature

30 hours plus conference; 3 credits
Stendhal, Balzac, Flaubert, Zola, others.

FREN 7617X Studies in Twentieth-Century Literature

30 hours plus conference; 3 credits
French literature from 1890 to 1930.

FREN 7618X Studies in Contemporary French Literature

30 hours plus conference; 3 credits
Readings from novels, theater, and criticism from 1930 to the present. Emphasis on post-World War II developments. Existentialism and the nouveau roman.

FREN 7620X Francophone Literary Movements and Trends

45 hours; 3 credits
A survey of Francophone literary history. A review of all the major periods in Francophone literature. A study of the appearance and development of literary movements, genres and trends throughout those periods. Short texts and excerpts will be read as illustrations of the different periods and genres studied.

FREN 7632X Evolution of Poetic Forms to Baudelaire

30 hours plus conference; 3 credits
French poetry from the Middle Ages through Romanticism.

FREN 7633X Studies in French Poetry from Baudelaire to the Present

30 hours plus conference; 3 credits
Important movements in modern French poetry: Parnasse, Symbolism, Surrealism, postwar.

FREN 7635X Francophone Poetry

45 hours; 3 credits
Majors writers and trends in Francophone Poetry.

FREN 7645X Francophone Novel

45 hours; 3 credits
Selected readings in the Francophone novel.

FREN 7652X Studies in Modern French Theater

30 hours plus conference; 3 credits
Plays, playwrights, movements from the turn of the century to the present.

FREN 7655X Francophone Theater

45 hours; 3 credits
A survey of major playwrights and trends in Francophone theater.

FREN 7690X Writings of a Major French Author

45 hours; 3 credits
An in-depth monographic study concentrating either on the works of a major French writer or on one of the masterpieces of French literature.

FREN 7695X Writings of a Major Francophone Author

45 hours; 3 credits
An in-depth monographic study concentrating either on the works of a major Francophone writer or on one of the masterpieces of Francophone literature.

FREN 7710X Seminar in Literature

30 hours plus conference; 3 credits
Detailed study of representative authors. Content of the course varies. This course may be repeated for credit.

Prerequisite: two graduate courses in French.

FREN 7750X Special Topics in Francophone Literature

45 hours; 3 credits
Special topics in Francophone authors or topics from Caribbean, African European, North American, Asian or Pacific cultures.

FREN 7900X Thesis Research

15 hours; 1 credit
Research for master's thesis, using primary as well as secondary sources, supervised by a faculty member. Student should consult with the instructor to get approval for a topic immediately upon registration. All work is to be in French. Degree is not earned until thesis is accepted. Students register for this course only once.

Prerequisite: permission of the chairperson.

Italian

ITAL 7690X Dante's Divina Commedia

45 hours; 3 credits
A reading of selected Cantos of the Divina Commedia, examined at its multiple levels of meaning, literal and allegorical, theological, political, psychological, and artistic.

Spanish

SPAN 7010X Grammatical and Syntactical Analysis

30 hours plus conference; 3 credits
Advanced analysis of grammatical and syntactical problems. Special attention will be paid to providing the knowledge of grammar and syntax needed to teach the Spanish language.

SPAN 7020X Problems in Advanced Spanish Grammar

30 hours plus conference; 3 credits
Detailed study of specific problems related to the study and teaching of Spanish syntax, orthography, and phonetics, with an emphasis on oral and written communication in the language. Content varies. Course may be repeated provided the topics and materials are different. This course is only offered at the Brooklyn College Summer Institute for Teachers in Madrid, Spain.

SPAN 7110X Writing and Stylistics

30 hours plus conference; 3 credits
Continued practice in written expression and in textual analysis for heritage and nonheritage speakers; compositions modeled on selected literary texts.

Prerequisite: Spanish 7010X [717X] or permission of the chairperson.

SPAN 7120X Seminar in Writing and Stylistics

30 hours plus conference; 3 credits
Development of individual and creative written expression in Spanish through a detailed examination of carefully selected critical and literary texts, reinforced by theoretical and pedagogical considerations designed to further the incorporation of a variety of writing skills and techniques into the classroom. Content varies. Course may be repeated provided the topics and materials are different. This course is only offered at the Brooklyn College Summer Institute for Teachers in Madrid, Spain.

SPAN 7160X Explicating Hispanic Literary Works

30 hours plus conference; 3 credits
An analysis of major works that are often taught in secondary school curricula, with special attention to developing literary critical perspectives.

SPAN 7170X Introduction to Literary Research

30 hours plus conference; 3 credits
Introduction to bibliographic sources, research materials, and the mechanics of documentation. Principles of literary theory and criticism. Presentation of a written paper.

SPAN 7310X History of the Spanish Language

30 hours plus conference; 3 credits
Evolution of Spanish from Latin. Phonology, morphology, syntax, semantics. This course is conducted in English.

Prerequisite: one year of college Latin or the equivalent.

SPAN 7320X Spanish Dialectology: The Language of Spain and the Americas

30 hours plus conference; 3 credits
A historical and linguistic study of the Spanish language in Spain and its present-day variants in Latin America, the Caribbean, and the United States.

SPAN 7340X Studies in Contemporary Spanish Language

30 hours plus conference; 3 credits
Detailed analysis of specific aspects of current oral and written usage in Spanish as manifested in a wide variety of vehicles of communication ranging from the personal to the public, with an emphasis on practical and pedagogical applications of a diversity of linguistic registers and modes. Content varies. Course may be repeated provided the topics and materials are different. This course is only offered at the Brooklyn College Summer Institute for Teachers in Madrid, Spain.

SPAN 7380X Language and Technology

45 hours; 30 hours multimedia laboratory; 3 credits
A systematic approach to multimedia resources for students and teachers of Languages Other Than English. Audiovisual materials (audio documents, films, and videos), software programs, electronic dictionaries. Audio, video, CD-ROM format and the Web information materials, news and other original texts in foreign languages in formats other than printed media. Use of e-mail as a teaching tool. Use of the Web as an environment for learning and teaching foreign languages. Development of classroom activities using multimedia technologies. To be taught in English.

SPAN 7510X Peninsular Hispanic Culture

30 hours plus conference; 3 credits
Aspects of contemporary peninsular Spanish culture and civilization and their relation to historical influences. Emphasis on the intellectual and artistic achievements of the Spanish people as well as their political and social institutions.

SPAN 7520X Latin American Culture

30 hours plus conference; 3 credits
Perceptions and values as expressed in the arts as well as in political and social institutions. Emphasis on manifestations of Hispanic, indigenous, and African values in the area as a whole as well as in its separate regions.

SPAN 7550X Seminar in Hispanic Cultures

30 hours plus fieldwork; 3 credits
Detailed exploration of a specific aspect of Spanish culture within the context of Latin American cultures of the Western Hemisphere, with an emphasis on the commonality as well as the diversity of the Hispanic heritage and the potential incorporation of such themes into the Spanish classroom. Content varies. Course may be repeated provided the topics and materials are different. This course is only offered at the Brooklyn College Summer Institute for Teachers in Madrid, Spain.

SPAN 7590X Studies in Contemporary Spanish Culture

30 hours plus fieldwork; 3 credits
Detailed analysis of particular aspects of specific cultural manifestations and trends in present-day Spain as independent phenomena as well as within a larger global context, as manifested in the media, the arts, narrative fiction, and the essay, with attention to the potential incorporation of such subjects into the Spanish classroom. Content varies. Course may be repeated provided the topics and materials are different. This course is only offered at the Brooklyn College Summer Institute for Teachers in Madrid, Spain.

SPAN 7600X Hispanic Literary Movements and Trends

45 hours; 3 credits
A survey of Hispanic literary history. This course reviews all the major periods in Hispanic literature in both continents and also studies the appearance and development of literary movements, genres, and trends throughout those periods. Short texts and excerpts will be read as illustrations of the different periods and genres studied.

SPAN 7610X Hispanic Literary Movements and Trends

30 hours plus conference; 3 credits
A survey of Spanish literary history. A review of all major periods in Spanish peninsular literature and a study of the appearance and development of literary movements, genres, and trends throughout those periods. Short texts and excerpts will be read as illustrations of the different periods and genres studied.

SPAN 7612X Spanish Prose and Poetry of the Golden Age

30 hours plus conference; 3 credits
Sixteenth- and seventeenth-century prose and poetry from La Celestina to La vida es sueno.

SPAN 7620X Hispanic Literary Movements and Trends

30 hours plus conference; 3 credits
A survey of Latin American literary history. A review of all major periods in Latin American literature and a study of the appearance and development of literary movements, genres, and trends throughout those periods. Short texts and excerpts will be read as illustrations of the different periods and genres studied.

SPAN 7622X Studies in Latin American Colonial Literature

30 hours plus conference; 3 credits
Developments through the eighteenth century.

SPAN 7638X Contemporary Hispanic Poetry

30 hours plus conference; 3 credits
Major writers and trends in Latin American and Peninsular poetry from Modernismo to the present. (Not open to students who have completed Spanish 750X or 764X.)

SPAN 7643X Spanish Novel of the Nineteenth Century

30 hours plus conference; 3 credits
Development of the Spanish novel from Romanticism through Realism to Naturalism.

SPAN 7644X Contemporary Spanish Novel

30 hours plus conference; 3 credits
Major novelists from the Generation of 1898 to the present.

SPAN 7647X Latin American Novel of the Nineteenth Century

30 hours plus conference; 3 credits
Romantic and Realist movements.

SPAN 7648X Contemporary Latin American Novel

30 hours plus conference; 3 credits
Aspects of the novel from the Modernist period to the present.

SPAN 7650X The Spanish Comedia

30 hours plus conference; 3 credits
Early developments. The plays of Lope, Tirso, and Calderon.

SPAN 7658X Contemporary Hispanic Theater

30 hours plus conference; 3 credits
Major playwrights and trends in Latin American theater from the 1930s to the present. (Not open to students who have completed Spanish 752X.)

SPAN 7660X Hispanic Short Narrative

30 hours plus conference; 3 credits
A study of short narrative written in the Spanish language, including the essay.

SPAN 7690X Cervantes

30 hours plus conference; 3 credits
Narrative prose of Cervantes. The Quijote.

SPAN 7710X Seminar in Literature

30 hours plus conference; 3 credits
Detailed study of representative authors. Content of the course varies. This course may be repeated for credit.

Prerequisite: two graduate courses in Spanish.

SPAN 7790G Thesis Research

Hours to be arranged; 1 credit
Research for the master's thesis supervised by a faculty member. Degree is not earned until thesis is accepted. Students register for this course only once.

Prerequisite: permission of the chairperson

SPAN 7910X Aspects of Spanish Culture and the Arts

30 hours plus fieldwork; 3 credits
Detailed, interdisciplinary study of specific aspects of the Spanish cultural heritage in relation to one or more of the performing and visual arts such as music, theater, film, television, painting, sculpture, and architecture, with attention to the potential incorporation of the arts into the Spanish classroom. Excursions, museums visits, live performances, films. Content varies. Course may be repeated provided the topics and materials are different. This course is only offered at the Brooklyn College Summer Institute for Teachers in Madrid, Spain.

Music, Conservatory of

Department office: 422 Whitehead Hall
Phone: 718.951.5286

Full-time Faculty

Distinguished Professors: Leon, Oppens
Professors: Allen, Barrett, Eckardt, Grubbs, Kawasaki, Leon, MacIntyre, Oppens, Rothman, Taylor
Associate Professors: Jensen-Moulton, Palmquist
Assistant Professors: Davis, Gythfeldt, O'Farrill
Lecturers: Cohen, Lewis

The Conservatory of Music, a New York City leader in the training of musicians, offers students rigorous training and individual instruction in both instrumental and vocal music. Students learn from a distinguished faculty of prominent performers, composers, musicologists, music educators, and theorists as well as a prestigious roster of guest artists.

The department teaches composition, musicology, conducting, music education, and music technology as well as guitar, brass, percussion, harp, voice, piano and organ, and strings and woodwinds. More than 150 student performances in various genres and formats are sponsored by the department yearly.

The department maintains an extensive schedule of guest artists, drawing not only from the huge pool of artists in New York City but also from around the globe. State-of-the-art facilities include performance venues of varying sizes, classrooms and practice rooms, and recording spaces. The Walter W. Gerboth Music Library offers music study, research, and listening and has a tremendous music collection as well as an excellent selection of periodicals, yearbooks and online reference works. By Fall 2016 the facilities will be augmented by an additional concert hall and new rehearsal spaces in the Leonard and Claire Tow Center for the Performing Arts.

Advanced diploma in music performance
HEGIS code 1004; SED program code 36846 (15 credit); 36847 (30 credit)

Matriculation requirements: Applicants for the program must have completed a Master's degree in music performance at a U.S. institution or professional equivalent, or a non-U.S. equivalent institutional degree. Applicants for the program must pass an audition at the time of application. A request for an audition appointment may be made by telephone to the Conservatory office.

International applicants for whom English is a second language are required to take the Test of English as a Foreign Language (TOEFL) and must have a minimum score of 500 on the paper examination (or TOEFL Computer 173; TOEFL iBT 60).

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Fifteen (or thirty) credits over one year (or two years) are required for the artist diploma in music performance. The duration of study depends on a student's technical level and performance career goals. The program of study must be approved by the conservatory.

Students must complete requirements for the program as follows. Any remaining credits required for the degree must be in music courses chosen in consultation with the deputy chairperson. Any course substitutions must be approved in writing prior to registration. Required ensembles are assigned by the conservatory, based on the entrance audition.

First Year (15 credits):
Music 7795 and 7796 (Distinguished Performance I & II); 7813 (Repertory Study for Major Instrument or Voice, taken both semesters); two courses from Music 7700 (Opera Workshop), 7760 (Orchestra), or 7770 (Wind Ensemble); two courses chosen from Music 7740 or Music 7741 (Chamber Music or Contemporary Music Ensemble); and 3 department-approved elective credits in 7000-level Music courses.

Second Year (15 credits):
Music 7797 and 7798 (Distinguished Performance III & IV); 7813 (Repertory Study for Major Instrument or Voice, taken both semesters); two courses from Music 7700 (Opera Workshop), 7760 (Orchestra), or 7770 (Wind Ensemble); two courses chosen from Music 7740 or Music 7741 (Chamber Music or Contemporary Music Ensemble); and 3 department-approved elective credits in 7000-level Music courses.

Students must perform a graded jury examination at the end of their first and third terms of study (i.e. for Music 7795 and 7797). A faculty-approved, graded recital must be presented at the conclusion of the second and fourth terms of study in this program (i.e. for Music 7796 and 7798).

The list of the music performance faculty is available online at
http://www.brooklyn.cuny.edu/web/academics/schools/mediaarts/departments/music/faculty.php

M.A. degree program in musicology
HEGIS code 1005; SED program code 02020

The master of arts degree in musicology is for the student who wishes to concentrate on music scholarship. With a breadth of graduate seminars that engage topics ranging from art music to jazz and popular music to ethnomusicology, graduate students in musicology can fully explore their interests before beginning thesis research. 30 credits in graduate level music courses and a thesis are required.

Matriculation requirements

Applicants must offer at least 36 credits in music courses including courses in analysis, counterpoint, harmony, and history.

Consideration is given to applicants who do not meet course requirements but have unusual talent or experience equivalent to course work. Such applicants should consult the assistant director.

A placement examination is given to all applicants for admission. The test includes writing skills (harmonic and contrapuntal techniques), analysis, history, and literature. Further information about the examination may be obtained from the assistant director.

Applicants in musicology must submit with the application two papers on either historical or analytic subjects.
General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements (30-36 credits)

Thirty credits and a thesis or 36 credits and no thesis are required for the degree in musicology. Before completing 12 credits, students must pass a test given by the conservatory in French, German, or another language approved by the assistant director. Students who completed their bachelor's degree using a modern language other than English may be exempted from this language examination by the assistant director. Students must pass a comprehensive examination. Information about requirements for the comprehensive examination and thesis is in the section "Academic Regulations and Procedures." Courses in the conservatory offered toward the degree must be 7000-level courses. The program of study must be approved by the conservatory.

Music U7000G; Music U7400G; four courses chosen from Music U7601G through U7651X, U7840X, U7850X, and 7860X, to include two seminars in history and one in theory; and one course chosen from Music 7700X through 7781X. Students may submit a thesis acceptable to the conservatory or complete specified required courses in lieu of a thesis. Students who choose to write a thesis must complete Music U7930X. Students who do not choose to write a thesis must complete three courses chosen from Music U7601G through U7651X, U7840X, 7850X, and 7860X.

Master of music degree program in composition
HEGIS code 1004.10; SED program code 88183

The 30-credit master of music degree in composition is the degree for a composer who seeks advanced study in composition. A key feature is weekly private composition lessons (for four semesters) with a member of our internationally acclaimed faculty. Residencies are available within the Conservatory's numerous ensembles and the orchestra, and a broad range of compositional styles is encouraged. At least two concerts per semester exclusively feature the work of Conservatory students. Students also complete a minimum of three seminars in style criticism, music history, and music theory.

Separate programs are offered in composition and in performance, each of which leads to the master of music degree.

Matriculation requirements

Applicants for either program must offer at least 36 credits in music courses including courses in analysis, counterpoint, harmony, and history.

Consideration is given to applicants who do not meet course requirements but have unusual talent or experience equivalent to course work. Such applicants should consult the assistant director.

A placement examination is given to all applicants for admission. The test includes writing skills (harmonic and contrapuntal techniques), analysis, history, and literature. Further information about the examination may be obtained from the assistant director.

Applicants for the program in composition must submit a completed composition or compositions, which should be sent to the assistant director at the time of application.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Thirty credits are required for the master of music degree in composition.

Before completing 12 credits, students must pass a test given by the conservatory in French, German, or another language approved by the assistant director. Students who completed their bachelor's degree using a modern language other than English may be exempted from this language examination by the assistant director.

Students must pass a comprehensive examination. Information about requirements for the comprehensive examination is in the section "Academic Regulations and Procedures." Courses in the conservatory offered toward the degree must be 7000-level courses. The program of study must be approved by the conservatory.

Students must also complete requirements for the program in composition or in performance as follows. Any remaining credits required for the degree must be in courses chosen in consultation with the assistant director.

Composition (22 credits): Music U7321X, U7322X, U7323X, U7400G; one course chosen from Music U7601G-U7606G, U7631G, U7650X, 7651X, U7840X, 7850X, 7860X; one course chosen from Music U7632G, U7641X, U7642X, U7643X; one course chosen from Music 7700X through 7781X; and Music U7940G. Students must submit a master's composition project.

Recommendation

Composition majors interested in electronic music who take Music U7321X-U7323X should also consider taking Music U7371G and U7372G.

Master of music degree program in performance
HEGIS code 1004; SED program code 88184

The 30-credit master of music degree in performance is a program aimed at the student who wishes to pursue a career as a professional instrumentalist or singer. A key component of this program is weekly private studio lessons for four semesters with our internationally acclaimed performance faculty. These lessons are augmented by performance opportunities within the Conservatory's ensembles and student concerts, which include two staged operas each year and numerous orchestra and contemporary ensemble performances. Students also complete a minimum of three seminars in style criticism, music history, and music theory. Gifted performers who do not yet meet all matriculation requirements for this program should consider applying for the advanced certificate in music performance.

Separate programs are offered in composition and in performance, each of which leads to the master of music degree.

Matriculation requirements

Applicants for either program must offer at least 36 credits in music courses including courses in analysis, counterpoint, harmony, and history.

Consideration is given to applicants who do not meet course requirements but have unusual talent or experience equivalent to course work. Such applicants should consult the assistant director.

A placement examination is given to all applicants for admission. The test includes writing skills (harmonic and contrapuntal techniques), analysis, history, and literature. Further information about the examination may be obtained from the assistant director.

Applicants for the program in performance must pass an audition at the time of application. A request for an audition appointment may be made by telephone to the conservatory office.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Thirty credits are required for the master of music degree in performance.

Before completing 12 credits, students must pass a test given by the conservatory in French, German, or another language approved by the assistant director. Students who completed their bachelor's degree using a modern language other than English may be exempted from this language examination by the assistant director.

Students must pass a comprehensive examination. Information about requirements for the comprehensive examination is in the section "Academic Regulations and Procedures." Courses in the conservatory offered toward the degree must be 7000-level courses. The program of study must be approved by the conservatory.

Students must also complete requirements for the program in composition or in performance as follows. Any remaining credits required for the degree must be in courses chosen in consultation with the assistant director.

Performance (25 credits): Music U7400G; one course chosen from Music U7601G-U7606G, U7631G, U7650X, 7651X, U7840X, 7850X, 7860X; one course chosen from Music U7632G, U7641X, U7642X; four courses chosen from Music 7700X through 7781X; and Music 7791X, 7792X, 7793X, U7950G. Students must perform a master's recital.

Recommendation

Music majors aiming toward professional careers as performers are strongly urged to take additional ensembles each semester, including at least two terms of Music 7741X, 7742X, 7743X, 7780X or 7781X (i.e., Contemporary Music Ensemble, Brass Ensemble, Woodwind Chamber Music, Jazz Ensemble, or Small Jazz Ensemble).

The list of the music performance faculty is available online at
http://www.brooklyn.cuny.edu/web/academics/schools/mediaarts/departments/music/faculty.php

Advanced certificate program in music education
HEGIS code 0832; SED program code 26817

The Conservatory of Music in conjunction with the Department of Secondary Education, offers an advanced certificate program in music education. The New York State Education Department licenses graduates of registered teacher education programs who meet the state requirements for teachers.

The advanced certificate in music education is for the student with an undergraduate music degree who wishes to teach music in the New York State public school system. This course of study meets the curricular requirements for initial certification in New York State. 21 credits, 100 field hours, and forty days of student teaching are required for the certificate. The courses required by the School of Education may vary depending on the entry qualifications of students.

All students should consult with the School of Education for the current requirements.

Matriculation requirements

Applicants must offer a B.Mus., or a B.A. or B.S. in music, or the equivalent from an accredited college or university completed with a grade point average of 3.00 or higher. Also eligible to apply are (a) students holding other music bachelor's degrees with sufficient course work in education and music education to be permitted to take student teaching, or (b) students holding a bachelor's degree with at least 36 credits in music courses, including an array of analysis, counterpoint, harmony, history, conducting, performance, education, and music education courses sufficient for admission to student teaching in music. Requirements for student teaching are available from the coordinator of music education. Applicants must also offer course work including the liberal arts and sciences, one course in human development (child and adolescent development), and one course in philosophy of education. Matriculation is contingent upon admission to Brooklyn College and admission to the Conservatory of Music, including music performance audition, music education interview, theory/aural skills test, and transcript review, and TOEFL score of at least 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, if required.

Certificate requirements

Twenty-one credits are required for this certificate. The following courses are required.

Music 6510T (2 semesters); Music 6581T; Music 6582T; Music 6583T; three courses chosen from Music 6601X-6661X; Music 7201X; SEED 6505T and SEED 6506T.

M.A. degree program in education: music teacher (all grades)
HEGIS code 0832; SED program code 26816

The Conservatory of Music in conjunction with the Department of Secondary Education, offers a master of arts degree in education for Music teachers (all grades). The New York State Education Department licenses graduates of registered teacher education programs who meet the state requirements for teachers.

The master of arts, music teacher degree is for certified music educators who are working towards their permanent certification. Students in the M.A., music teacher program have the opportunity to explore musical topics beyond the realm of music education by participating in graduate seminars in music history, music theory, performance practice, and conservatory ensembles, while taking advanced courses in the history and theory of music education. 30 credits in graduate level music courses are required. (Graduate level School of Education courses may be used as electives.) Students can either complete a thesis or education project, or complete 33 credits without a project. All students should consult with the School of Education for the current requirements.

Matriculation requirements

In addition to meeting the general matriculation and admission requirements of the Division of Graduate Studies, applicants must hold either a B.A. in music teaching or a B.Mus. in music education. Also eligible to apply are (a) students holding other music bachelor's degrees with sufficient course work in education and music education to be permitted to take student teaching, or (b) students holding a bachelor's degree with at least 36 credits in music courses, including an array of analysis, counterpoint, harmony, history, conducting, performance, education, and music education courses sufficient for admission to student teaching in music. Requirements for student teaching are available from the coordinator of music education.

Applicants must submit a copy of their New York State teaching certificate. Applicants must have a minimum undergraduate grade point average of 3.00. International applicants for whom English is a second language must have attained a TOEFL score of at least 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, to be considered for admission.

Applicants must pass a performance audition and music education interview and submit a portfolio including such items as résumé, writing sample, and evidence of teaching experience.

A placement examination covering music history, theory,and analysis is given to all applicants for admission. Further information about the examination is available from the assistant director of the Conservatory of Music.

The student's program must be planned and approved by the coordinator of music education and approved by the assistant director. Courses in the conservatory offered toward the degree must be 7000-level courses.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty to 33 credits are required for the degree.

The following courses are required:

1. Music U7400G.

2. One course chosen from Music Music U7601G-U7606G, 7631G, U7650X, 7651X, 7850X or 7860X.

3. One course chosen from Music 7632G, 7641X, 7642X.

4. Two courses chosen from Music 7700X through 7781X.

5. One course chosen from Education [724.12T], Music 7000G, or Music 7010T.

6. Music 7201X and 7170T.

7. One course chosen from Music 7101X, 7121X, 7122X, 7150T, 7633X.

8. Four credits in music, music performance (studio lessons and/or ensembles), music education, or education electives.

9. Thesis (Music U7930X) or Music Education Master's Project (Music 7920T) or an additional 6 credits in music, music performance (studio lessons and/or ensembles), music education, or education electives.

Students must pass a comprehensive examination. Information about requirements for the comprehensive examination is in the section "Academic Regulations and Procedures" of the Graduate Bulletin.

Advanced certificate in music performance
HEGIS code 1004; SED program code 36848 (15 credit); 36849 (30 credit)

Matriculation requirements: Applicants for the program must a) have completed a bachelor's degree in music or music performance at a U.S. institution or professional equivalent, or a non-U.S. equivalent institutional degree and b) pass a live audition before Conservatory faculty at an advanced level that demonstrates clear promise as a performer. A request for an audition appointment may be made by telephone to the Conservatory office.
International applicants for whom English is a second language are required to take the Test of English as a Foreign Language (TOEFL) and must have a minimum score of 500 on the paper examination (or TOEFL Computer 173; TOEFL iBT 60).
Students who hold an accredited bachelor's degree with at least 36 credits in music courses, including courses in analysis, counterpoint, harmony, and history, may also apply. Consideration is also given to applicants who do not meet course requirements but have unusual talent or experience equivalent to course work. Such applicants should consult the deputy chairperson.
A diagnostic placement examination is given to all admitted students. The test includes writing skills (harmonic and contrapuntal techniques), analysis, history, and literature. Further information about the examination may be obtained from the deputy chairperson.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Fifteen (or thirty) credits over one year (or two years) are required for the advanced certificate in music performance. The duration of study depends on a student's level of ability and performance career goals. The program of study must be approved by the conservatory.

Students must complete requirements for the program as follows. Any remaining credits required for the degree must be in music courses chosen

in consultation with the deputy chairperson. Any course substitutions must be approved in writing prior to registration. Required ensembles are assigned by the conservatory, based on the entrance audition.

First Year (15 credits):
Music 6791 and 6792 (Adv. Performance I & II); 6813 (Repertory Study for Major Instrument or Voice, taken both semesters); two courses from Music 7700 (Opera Workshop), 7760 (Orchestra), or 7770 (Wind Ensemble); two courses chosen from Music 7740 or Music 7741 (Chamber Music or Contemporary Music Ensemble); and 3 department-approved elective credits in 7000-level Music courses.

Second Year (15 credits):
Music 6793 and 6794 (Adv. Performance III & IV); 6813 (Repertory Study for Major Instrument or Voice, taken both semesters); two courses from Music 7700 (Opera Workshop), 7760 (Orchestra), or 7770 (Wind Ensemble); two courses chosen from Music 7740 or Music 7741 (Chamber Music or Contemporary Music Ensemble); and 3 department-approved elective credits in 7000-level Music courses.

Students must perform a graded jury examination at the end of their first and third terms of study (i.e. for Music 6791 and 6793). A faculty-approved, graded recital must be presented at the conclusion of the second and fourth terms of study in this program (i.e. for Music 6792 and 6794).

The list of the music performance faculty is available online at
http://www.brooklyn.cuny.edu/web/academics/schools/mediaarts/departments/music/faculty.php

CUNY Ph.D.

The City University of New York offers a doctoral program in musicology, ethnomusicology, theory, composition, and performance. General information about CUNY Ph.D. and D.M.A. programs is in the chapter "Support for Academic Success in Graduate School." Conservatory of Music courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the assistant director of The Conservatory of Music and the executive officer of the doctoral program.

Walter W. Gerboth Music Library

Named in honor of its principal founder and first librarian, respected teacher and scholar Walter W. Gerboth, the library offers facilities for music study, research, and listening. The music library is located on the second floor of the Brooklyn College Library. Established more than fifty years ago and augmented by substantial bequests, the collection comprises scores, collected works, phonograph recordings, tapes, compact discs, music and dance video cassettes, CD-ROMs, playback equipment for on-site listening, and general and specialized books about music and dance as well as a fine selection of periodicals, yearbooks, and online music reference works. Subject strengths lie in American music and performance scores. The collection is complemented by that of the Hitchcock Institute for Studies in American Music, 415 Whitehead Hall.

Courses

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

Not all courses are offered each term.

Courses Music 7700 through 7781 may be taken for credit each term the student is enrolled.

The following Music seminars may be repeated for credit with a different topic, as indicated in the Schedule of Classes and approved by the director:
Music U7603G-U7606G - Seminar(s) in music history;
Music U7631G, U7632G, U7633X, U7634X, U7641X, U7642X, U7650X, U7651X, U7840X, 7850X.

MUSC 6040T Music for the Classroom Teacher

45 hours; 3 credits
Development of the musical background of the elementary school teacher. Exploration, presentation, and discussion of approaches to teaching music in elementary school. Demonstration of the techniques of Orff, Kodaly, and others. Listening and performing activities.

MUSC 6510T Music Education Colloquium

15 hours, 20 hours fieldwork; 0 credits
A colloquium for music education majors. Guest speakers, student and faculty presentations, discussions on current topics in music education. Required of music education majors each semester. Field experience in the public schools. Assigned grades of P or F.

MUSC 6581T Music in the Elementary School

45 hours, 30 hours supervised field experience; 3 credits
Techniques, methods, and materials used in teaching music in the elementary schools including instruction for pre-kindergarten children. Development and application of music, teaching, and observation skills; assessment and organization in the context of the overall elementary school music program; child development; diversity. Includes observation and supervised teaching in public schools.

Prerequisite: permission of the director.
Corequisite: Music 6510T [651T].

MUSC 6582T Music in the Secondary School

45 hours, 15 hours field experience; 3 credits
Study of techniques, methods, and materials used in teaching music in diverse, multicultural secondary schools, including choral and

instrumental ensembles and general music courses. Recruitment, curriculum, materials analysis, assessment, adolescent development, technology, special learners, and current issues. Includes supervised field experience in public schools.

Prerequisite: permission of the director. Corequisite: Music 6510T [651T].

MUSC 6583T Music in Special Education

45 hours, 15 hours field experience; 3 credits
Techniques, methods, and materials used in teaching music to special learners of different ages and developmental levels, especially in an inclusive classroom setting. Current issues. Field experience.

Corequisite: Music 6510T [651T].

MUSC 6601X Voice Production

30 hours; 1 credit
Technique of singing. Proper breathing, tone placement, legato scale, agility exercises. Attention to individual needs. Phrasing, diction, interpretation.

Prerequisite: an introductory course in sightsinging and dictation or permission of the director.

MUSC 6611X String Class: Violin and Viola

45 hours; 1 credit
Tuning, bowing, and positions for violin and viola. Practice in reading simple compositions. For beginners. Primarily for use in public school teaching. No previous knowledge of a stringed instrument required.

Prerequisite: Ability to read music and permission of the director. Corequisite: Music 6510T [651T].

MUSC 6621X String Class: Violoncello and Bass Viol

45 hours; 1 credit
Tuning, bowing, and positions for bass viol and violoncello. Practice in reading simple compositions. For beginners. Primarily for use in public school teaching. No previous knowledge of a stringed instrument required.

Prerequisite: ability to read music and permission of the director. Corequisite: Music 6510T [651T].

MUSC 6630X Woodwind Class

45 hours; 1 credit
Mechanism, embouchure, and tone production of the flute, oboe, clarinet, bassoon. Practice in reading simple compositions. For beginners. No previous knowledge of a woodwind instrument is required. Primarily for use in public school teaching.

Prerequisite: ability to read music and permission of the director. Corequisite: Music 6510T [651T].

MUSC 6640X Brass Class

45 hours; 1 credit
Fingering, embouchure, and tone production of the trumpet, French horn, trombone, tuba. Practice in reading simple compositions. For beginners. No previous knowledge of a brass instrument is required. Primarily for use in public school teaching.

Prerequisite: ability to read music and permission of the director. Corequisite: Music 6510T [651T].

MUSC 6650X Percussion Class

45 hours; 1 credit
Principles of percussion technique. Practice in reading simple compositions. For beginners. No previous knowledge of a percussion instrument is required. Primarily for use in public school teaching.

Prerequisite: ability to read music and permission of the director. Corequisite: Music 6510T [651T].

MUSC 6661X Fretted Instrument Class

45 hours; 1 credit
Tuning, sound production, and positions for fretted instruments (guitars and lutes). Practice in reading simple compositions. Primarily for use in public school teaching. No previous knowledge of a fretted instrument is required.

Prerequisite: ability to read music and permission of the director. Corequisite: Music 6510T [651T].

MUSC 6791X Advanced Performance I

30 hours lecture; 15 hours recitation, at least 120 hours independent work; 3 credits.
Advanced level of private performance study of the student's major instrument or voice. Conservatory-approved performance jury required as final examination.

Prerequisite: Conservatory-approved audition and acceptance into the Advanced Certificate program in Music Performance.

MUSC 6792X Advanced Performance II

30 hours lecture; 15 hours recitation, at least 120 hours independent work; 3 credits.
Continuation of MUSC 6791X. Students must continue in voice or instrument studied in MUSC 6791. Conservatory-approved recital required as final examination.

Prerequisite: MUSC 6791X.

MUSC 6793X Advanced Performance III

30 hours lecture; 15 hours recitation, at least 120 hours independent work; 3 credits.
Continuation of MUSC 6792X. Students must continue in voice or instrument studied in MUSC.6792. Conservatory-approved performance jury required as final examination.

Prerequisite: MUSC 6792X.

MUSC 6794X Advanced Performance IV

30 hours lecture; 15 hours recitation, at least 120 hours independent work; 3 credits.
Continuation of MUSC 6793X. Students must continue in voice or instrument studied in MUSC.6793. Conservatory-approved recital required as final examination.

Prerequisite: MUSC 6793X.

MUSC 6813X Repertory for Major Instrument or Voice

30 hours lecture; 1 credit
Study of orchestral, chamber, and solo repertoire for one's major instrument or voice. Students will be expected to speak and write about the works they perform. May be taken each semester the student is enrolled.

Prerequisite: Conservatory-approved audition and acceptance into the Advanced Certificate program in Music Performance.

MUSC U7000G Bibliography and Research Techniques

45 hours; 3 credits
Study and evaluation of sources and bibliographical methods.

MUSC U7010T Music Education Research Methods

45 hours; 3 credits
Introduction to music research. Reading, evaluating, applying music education and related research findings. Research techniques in music education. Includes data collection, codification, interpretation.

Prerequisite: permission of the director.

MUSC 7101X Choral Workshop

45 hours; 3 credits
Literature and technique pertaining to the development of school choral groups, including preparation and presentation of choral works for school choral ensembles.

Prerequisite: an undergraduate course in conducting or permission of the director.

MUSC 7121X Instrumental Workshop: Strings

45 hours; 3 credits
Techniques of playing the violin, viola, violoncello, string bass. Materials and repertoire for school string ensembles. (Not open to students who have completed Music 712X.)

Prerequisite: an undergraduate course in conducting or permission of the director.

MUSC 7122X Instrumental Workshop: Woodwinds and Brass

45 hours; 3 credits
Techniques of playing woodwind and brass instruments. Materials and repertoire for school wind ensembles.

Prerequisite: an undergraduate course in conducting or permission of the director.

MUSC 7150T General Music in Elementary and Secondary Schools

45 hours; 3 credits
Schools of thought related to teaching general music in elementary and secondary schools. Survey of appropriate classroom materials.

Prerequisite: permission of the director.

MUSC 7170T Foundations and Methods of Music Education

45 hours; 3 credits
Philosophical and historical foundations of music education. Methods, techniques, independent projects.

Prerequisite: permission of the director.

MUSC 7201X Conducting and Rehearsal Techniques

45 hours; 3 credits
Intensive practical instruction in conducting, rehearsal techniques, and materials applicable to vocal and instrumental performance ensembles in the public schools. Emphasis on conducting; score study; rehearsal planning, organization, and pacing; error detection and correction; student motivation; repertoire and concert programming; music performance curriculum; large and small choral and instrumental ensembles. Techniques for teaching heterogeneous choral and instrumental courses. Field observations and fieldwork in the public schools.

Prerequisite: permission of the director

MUSC 7202X Advanced Conducting Seminar

45 hours; 3 credits
Conducting and rehearsing choral and instrumental literature in a laboratory setting.

MUSC 7310X Compositional Techniques

45 hours; 3 credits
Writing in various styles and media for the noncomposition major. (Not open to composition majors).

Prerequisite: permission of the director.

MUSC U7321X Seminar in Composition I

45 hours each term; 3 credits each term
Original writing in various media, instrumental and vocal.

Prerequisite:permission of the director.

MUSC U7322X Seminar in Composition II

45 hours each term; 3 credits each term
Original writing in various media, instrumental and vocal.

Prerequisite: Music U7321X [732.1X] and permission of the director.

MUSC U7323X Seminar in Composition III

45 hours each term; 3 credits each term
Original writing in various media, instrumental and vocal.

Prerequisite: Music U7322X [732.2X] and permission of the director.

MUSC 7350T Vocal and Instrumental Arranging

45 hours; 3 credits
Practical work in scoring for various ensembles. Independent projects.

Prerequisite: permission of the director.

MUSC 7370X Introduction to Music Technology

45 hours; 3 credits
Introduction to an array of available software for the creation, documentation, and instruction of music. Designed for any graduate musician interested in computer-based tools to enhance musical life and career. Topics include digital audio, MIDI, music notation, music on the Internet, presentation of one's work, and pedagogical tools.

Prerequisite: Matriculation in a graduate visual, media, or performing arts program; or permission of instructor.

MUSC U7371G Computer Music I

45 hours; 3 credits
Fundamentals of computer use in music composition. Techniques of additive synthesis. Chowning frequency modulation, waveshaping. Completion of a short work is required. Computer facilities are available for student use. (Not open to students who have completed Music 737G.)

MUSC U7372G Computer Music II

45 hours; 3 credits
Application of digital signal processing techniques to music composition.

Computer analysis of sound and speech, digital filtering techniques, computer speech synthesis. Completion of a short work is required. Computer facilities are available for student use.

MUSC 7373X Building Electronic Music Instruments

45 hours; 3 credits
In this course students learn how to design, program, and build their own electronic music instruments and installations, including both hardware and software. Topics include essentials of electronic circuits, interfacing them with computers, and instrument programming. Although the focus is on music, many aspects of the course topics are also applicable to interactive electronic art and theater.

Prerequisite: MUSC 7372 or PIMA 7741, or permission of instructor.

MUSC 7380X Jazz Arranging

45 hours; 3 credits
Practical work in scoring for various jazz ensembles.

Prerequisite: permission of the director.

MUSC U7400G Seminar in Style Criticism

45 hours; 3 credits
The nature of musical style. Study of selected works, composers, schools of composition, historical eras.

MUSC U7540X Seminar in Advanced Musicianship: Jazz

45 hours; 3 credits
Work in advanced ear-training, harmonic function, chordal progression, blues patterns, and vocabulary of jazz; aural and written transcriptions of improvisations; principles of major/minor, modal, pentatonic, altered, and whole-tone scale constructions; exploration of the relationship between improvisation and harmonic context.

Prerequisite: permission of the director.

MUSC U7603G Seminar in Music History: Baroque Era (1600-1750)

45 hours each term; 3 credits each term
Investigation of general principles and specific phenomena pertaining to the period. Independent research. Topic to be announced. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite: Music U7400G [740G] or the equivalent.

MUSC U7604G Seminar in Music History: Classic Era (1750-1820)

45 hours each term; 3 credits each term
Investigation of general principles and specific phenomena pertaining to the period. Independent research. Topic to be announced. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite: Music U7400G [740G] or the equivalent.

MUSC U7605G Seminar in Music History: Romantic Era (1820-1900)

45 hours each term; 3 credits each term
Investigation of general principles and specific phenomena pertaining to the period. Independent research. Topic to be announced. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite: Music U7400G [740G] or the equivalent.

MUSC U7606G Seminar in Music History: Twentieth Century

45 hours each term; 3 credits each term
Investigation of general principles and specific phenomena pertaining to the period. Independent research. Topic to be announced. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite: Music U7400G [740G] or the equivalent.

MUSC U7631G Special Topics Seminar: History

45 hours; 3 credits
Intensive historical studies. Examination and evaluation of original sources. Topic to be announced. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite: Music U7400G [740G] or permission of the director.

MUSC U7632G Special Topics Seminar: Theory

45 hours; 3 credits
Intensive theoretical studies. Examination and evaluation of original sources. Topic to be announced. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite: Music U7400G [740G] or permission of the director.

MUSC U7633X Special Topics Seminar: Music Education

45 hours; 3 credits
Intensive study of specific issues and approaches in music education. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite: permission of the director

MUSC U7634X Special Topics Seminar: Performance

45 hours; 3 credits
Intensive studies in music performance. Topic to be announced. May be repeated for credit with a different topic. Prerequisite: permission of the director. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite or corequisite: Music U7400G [740G]. Corequisite: Music 7791X [U779.1X], 7792X [U779.2X], 7793X [U779.3X], or 7950G [U795G].

MUSC U7641X Seminar in Music Theory: Analysis of Tonal Music

45 hours; 3 credits
Intensive analysis of tonal music. Developing adequate theoretical concepts and analytic techniques. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

MUSC U7642X Seminar in Music Theory: Analysis of Twentieth-Century Music

45 hours; 3 credits
Intensive analysis of twentieth-century music. Developing adequate theoretical concepts and analytic techniques. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

MUSC U7643X Seminar in Music: Philosophy of Music

45 hours; 3 credits
Critical examination of philosophical issues pertaining to music. Consideration of such issues as: the definition or concept of music, the ontology of music, musical meaning and understanding, musical expressiveness and arousal, musical representation, musical performance and authenticity of performance, the power and value of music, and the aesthetics of jazz, rock, and popular music. Classical and contemporary philosophers. This course is the same as Philosophy 7512X [722.3X] .

Prerequisite: one course in philosophy or one course in music or permission of the chairperson of Philosophy or Music.

MUSC U7650X Seminar in American Music

45 hours; 3 credits
American music from the colonial period to the present. Topic to be announced. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite: Music U7400G [740G] or the equivalent.

MUSC 7651X Seminar in Jazz History

45 hours; 3 credits
Selected topics in the history of jazz, from its origins to the present. Research and analysis of recordings, transcriptions, and arrangements. Emphasis on social and cultural context. Students may take this course for credit twice, but may not repeat topics. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite: Music U7400G [740G] or the equivalent

MUSC 7700X Opera Workshop

45 hours; 1 credit
Study and performance of scenes from operas and operettas. Fundamentals of operatic technique. Coordination of singing and stage movement. May be taken for credit each term the student is enrolled.

Prerequisite: audition.

MUSC 7710X Choral Union

45 hours; 1 credit
Study and performance of choral literature from a multiplicity of genres and style periods, with particular emphasis given to the development of fundamental musicianship skills, music literacy, and vocal technique. This ensemble welcomes all students without audition. May be taken for credit each term the student is enrolled.

MUSC 7711X Conservatory Singers

45 hours; 1 credit
Brooklyn College's premiere choral ensemble performs literature from a multiplicity of genres and style periods, including major works with orchestra. Open by audition. May be taken for credit each term the student is enrolled.

Prerequisite: audition.

MUSC 7720X Percussion Ensemble

45 hours; 1 credit
Study and performance of music for percussion ensemble. May be taken for credit each term the student is enrolled.

Prerequisite: audition.

MUSC 7740X Chamber Music

45 hours; 1 credit
Study and performance of the standard repertoire. May be taken for credit each term the student is enrolled.

Prerequisite: At least two terms (in any combination) of Music 7741X [774.1X], 7742X [774.2X], 7743X [774.3X], 774.5X, or 7780X [778X]; and permission of the director.

MUSC 7741X Contemporary Music Ensemble

45 hours; 1 credit
Study and performance of contemporary music. May be taken for credit each term the student is enrolled.

Prerequisite: audition.

MUSC 7742X Brass Ensemble

45 hours; 1 credit
Experience for both small and large chamber groups in the study and performance of traditional and contemporary music for brass instruments. Emphasis on developing basic musicianship through systematic work on intonation, phrasing, balance, and interpretation. Study of brass instrument history, technique, repertoire, and pedagogy. May be taken for credit each term the student is enrolled.

Prerequisite: audition.

MUSC 7743X Woodwind Chamber Music

3 hours; 1 credit
Study and performance of music for woodwind chamber ensembles. May be taken for credit each term the student is enrolled.

Prerequisite: audition.

MUSC 7744X Electroacoustic Music Ensemble

45 hours; 1 credit
In this course students will develop skills of ensemble music performance with electronic music instruments, combining diverse timbres and approaches to sound production and control. Instruments will include completely electronic ones as well as hybrids that combine acoustic instruments with digital signal processing. The group will explore instrument creation, networked interaction, incorporation of improvisation, and arrangement of amplified sound sources. Students will perform existing repertoire and have the opportunity to compose new works. The goal of each semester will be two or more public performances. May be taken for credit each term the student is enrolled.

Prerequisite: MUSC 7372, or PIMA 7741; or permission of instructor.

MUSC 7760X Orchestra

75 hours; 1 credit
Study and performance of new and old literature. May be taken for credit each term the student is enrolled.

Prerequisite: audition.

MUSC 7761X String Orchestra

45 hours; 1 credit
Study and performance of literature for string orchestra. May be taken for credit each term the student is enrolled.

Prerequisite: audition.

MUSC 7770X Wind Ensemble

45 hours; 1 credit
Study and performance of new and old literature. May be taken for credit each term the student is enrolled.

Prerequisite: audition.

MUSC 7780X Jazz Big Band

45 hours; 1 credit
Study and performance of new and old jazz literature. May be taken for credit each term the student is enrolled.

Prerequisite: audition.

MUSC 7781X Small Ensemble Jazz

45 hours; 1 credit
Study and performance of music for small jazz combo, including practical experience with jazz improvisation techniques and styles. May be taken for credit each term the student is enrolled.

Prerequisite: audition.

MUSC 7791X Performance I

45 hours each term; 3 credits each term
Advanced performance in voice or an instrument. One hour a week of individual instruction. Weekly performance seminar.

Prerequisite: audition and permission of the director.
Corequisite: an ensemble performance course (Music 7700X [770X]–7781X [778.1X]) as assigned through audition and permission of the director.

MUSC 7792X Performance II

45 hours each term; 3 credits each term
Advanced performance in voice or an instrument. One hour a week of individual instruction. Weekly performance seminar.

Prerequisite: Music 7791X [779.1X] and audition and permission of the director.
Corequisite: an ensemble performance course (Music 7700X [770X]–7781X [778.1X]) as assigned through audition and permission of the director.

MUSC 7793X Performance III

45 hours each term; 3 credits each term
Advanced performance in voice or an instrument. One hour a week of individual instruction. Weekly performance seminar.

Prerequisite: Music 7792X [779.2X] and audition and permission of the director.
Corequisite: an ensemble performance course (Music 7700X [770X]–7781X [778.1X]) as assigned through audition and permission of the director.

MUSC 7795X Distinguished Performance I

30 hours lecture; 15 hours recitation, at least 120 hours independent work; 3 credits.
Private performance study of the student's major instrument or voice at an exceptionally advanced level. Conservatory-approved performance jury required as final examination.

Prerequisite: Completed master's degree in music, a Conservatory-approved audition and acceptance into the Advanced Diploma program in Music Performance.

MUSC 7796X Distinguished Performance II

30 hours lecture; 15 hours recitation, at least 120 hours independent work; 3 credits.
Continuation of MUSC 7795X. Students must continue in voice or instrument studied in MUSC 7795X. Conservatory-approved recital required as final examination.

Prerequisite: MUSC 7795X.

MUSC 7797X Distinguished Performance III

30 hours lecture; 15 hours recitation, at least 120 hours independent work; 3 credits.
Continuation of MUSC 7796X. Students must continue in voice or instrument studied in MUSC 7796X. Conservatory-approved performance jury required as final examination.

Prerequisite: MUSC 7796X.

MUSC 7798X Distinguished Performance IV

30 hours lecture; 15 hours recitation, at least 120 hours independent work; 3 credits.
Continuation of MUSC 7797X. Students must continue in voice or instrument studied in MUSC 7797X. Conservatory-approved recital required as final examination.

Prerequisite: MUSC 7797X.

MUSC U7811X Piano Repertory Class

30 hours; 0 credit
Study of solo piano repertoire from the 1600s to the present through critique of student performance. Piano history, literature, performance prectice, and performance. Practical application in solo performance settings as assigned. May be taken more than once.

Prerequisite: permission to take Music 7791X [779.1X]-7793X [779.3X], 7950G [U795G], or permission of the director. Corequisite: Music 7791X [779.1X]-7793X [779.3X], or 7950G [U795G], as applicable.

MUSC 7812X String Repertory Class

30 hours; 0 credit
Performance by string majors of solo and chamber music repertory in a master-class setting. Guided discussion of important issues and areas of technique and interpretation to enhance optimal performance, increase self-confidence, and eliminate performance anxiety. Constructive observations and suggestions from class members, string faculty, and invited guests. Required of all string majors.

Prerequisite: permission of the director. Corequisite: a course in the Music 779X sequence or Music 7950G [795X].

MUSC 7813X Repertory for Major Instrument or Voice

30 hours lecture; 1 credit
Study of orchestral, chamber, and solo repertoire for one's major instrument or voice. Students will be expected to speak and write about the works they perform. May be taken each semester the student is enrolled.

Prerequisite: Conservatory-approved audition and acceptance into the Advanced Diploma program in Music Performance.

MUSC 7821X Accompanying at the Keyboard I

30 hours recitation, minimum 30 hours practicum; 3 credits
Skills for instrumental and vocal accompanying at the keyboard. Repertory includes instrumental sonatas, vocal songs, and orchestra

reductions of string, wind, operatic, and choral literature. Transposition and score reading at sight. Practical application in performing situations, as assigned.

Prerequisite: Music 7791X [779.1X] (in piano, organ, or harpsichord) and permission of the director.

MUSC U7840X Seminar in Performance Practices

45 hours; 3 credits
Study of documents and instruments concerning the authentic performance practice of music from the seventeenth century through the twentieth century. Topic to be announced. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite: Music U7400G [740G] or the equivalent.

MUSC 7850X Ethnomusicology

45 hours; 3 credits
Instruction in ethnomusicological research techniques through study of a special culture or group. May be repeated for credit with a different topic, as indicated in the class schedule and approved by the director.

Prerequisite: Music U7400G [740G] or the equivalent.

MUSC 7860X History of Jazz

45 hours; 3 credits
Survey of styles, genres, and forms of jazz from its origin to the present. Analysis of selected works.

Prerequisite: Music U7400G [740G] or the equivalent.

MUSC 7881X Music Internship

45 hours fieldwork; 1 credit
Supervised on- or off-campus work at least three hours per week in an office or classroom of a business, educational facility, or other agency providing professional experience in music, music performance, music education, or music research. Submission of a critical report on the experience. This course may be taken for credit twice, but students may not offer more than six credits from Music 7881X [788.1X], 7882X [788.2X], and 7883X [788.3X] toward a degree.

Prerequisite: permission of the director of the Conservatory of Music. Permission requires advance approval from the internship site.

MUSC 7882X Music Internship

90 hours fieldwork; 2 credits
Supervised on- or off-campus work at least six hours per week in an office or classroom of a business, educational facility, or other agency providing professional experience in music, music performance, music education, or music research. Submission of a critical report on the experience. This course may be taken for credit twice, but students may not offer more than six credits from Music 7881X [788.1X], 7882X [788.2X], and 7883X [788.3X] toward a degree.

Prerequisite: permission of the director of the Conservatory of Music. Permission requires advance approval from the internship site.

MUSC 7883X Music Internship

135 hours fieldwork; 3 credits
Supervised on- or off-campus work at least nine hours per week in an office or classroom of a business, educational facility, or other agency providing professional experience in music, music performance, music education, or music research. Submission of a critical report on the experience. This course may be taken for credit twice, but students may not offer more than six credits from Music 7881X [788.1X], 7882X [788.2X], and 7883X [788.3X] toward a degree.

Prerequisite: permission of the director of the Conservatory of Music. Permission requires advance approval from the internship site.

MUSC U7911X Independent Study

Hours to be arranged; 1 credit
Reading and research supervised by a faculty member.

Prerequisite: permission of the director.

MUSC U7912X Independent Study

Hours to be arranged; 2 credits
Reading and research supervised by a faculty member.

Prerequisite: permission of the director.

MUSC U7913X Independent Study

Hours to be arranged; 3 credits
Reading and research supervised by a faculty member.

Prerequisite: permission of the director.

MUSC U7920T Master's Music Education Project

Hours to be arranged; 3 credits
Substantial project in music education supervised by a faculty member. Students register for this course only once. Credit is not earned until the completed project is accepted.

Prerequisite: approval of plan of work by music education coordinator or permission of the director

MUSC U7930X Thesis Research

Hours to be arranges; 3 credits
Research for master's thesis supervised by faculty member. Students register for this course only once. Credit is not earned until the thesis is accepted.

Prerequisite: permission of the director.

MUSC U7940G Master's Composition Project

Hours to be arranged; 3 credits
Completion of a substantial composition project supervised by a faculty member.

Prerequisite: approval of plan of work by student's graduate committee.

MUSC U7950G Master's Recital

Hours to be arranged; 3 credits
Preparation of a master's recital supervised by a faculty member.

Prerequisite: approval of program and level of work by the student's graduate committee.
Corequisite: an ensemble course (Music 7700X [770X]-7781X [778.1X]) as assigned through audition and permission of the director.

The following inactive course(s) will only be offered if there is sufficient demand:

MUSC 6201T Musicianship for the Elementary School Specialist I

MUSC 6202T Musicianship for the Elementary School Specialist II

MUSC 7750X Collegium musicum

MUSC 7762 Theater Orchestra

MUSC 7822X Accompanying at the Keyboard II

Performance and Interactive Media Arts

Department office: 312a Whitehead Hall
Phone: 718.951.1994*

The graduate programs in Performance and Interactive Media Arts (PIMA) provide students with theoretical and practical experience in the conceptualization and production of collaborative, multi-disciplinary artworks presented in performance. Students learn to use technology as a means of extending their personal artistic practice and facilitating cross-disciplinary artistic collaborations. Students with diverse academic, artistic, professional, and cultural backgrounds enter the program and work in collaborative groups with close mentoring by faculty members. Most students come to the program with an established career or career goal in an arts field, and generally continue in that field after completing a PIMA degree, utilizing the degree for advancement, skills development, or as an entree into academia. PIMA is a collaborative effort of the Brooklyn College Departments of Art, Computer and Information Science, Television and Radio, and Theater, and the Conservatory of Music. The faculty is drawn from all four departments and the Conservatory.

M.F.A. degree program in performance and interactive media arts
HEGIS code 1099; SED program code 31062

PIMA is a four-semester full-time graduate degree program providing students with training in theoretical, technical and practical experience in the conceptualization and production of collaborative, multi-disciplinary artworks presented in a performance setting. Students learn to use technology as a means of extending their personal artistic practice and facilitating cross-disciplinary artistic collaborations. Students with diverse academic, artistic, professional, and cultural backgrounds enter the program and work in collaborative groups throughout the course of study, with close mentoring by faculty members. Most students come to the program with an established career or career goal in an arts field, and generally continue in that field after completing the PIMA degree, utilizing the degree for advancement, skills development, or as an entrée into academia. In the second year a major collaborative thesis production is created and presented in a professional venue. The program is a cooperative effort of the Brooklyn College Departments of Art, Computer and Information Science, Television and Radio, and Theater, and the Conservatory of Music. The faculty is drawn from all four departments and the conservatory.

Matriculation requirements

Applicants must offer a graduate or undergraduate degree from an accredited college or university completed with a grade point average of 3.00 or higher.

Applicants must also offer a portfolio of creative work (which may consist of work in any medium including computer software), letters of recommendation, and TOEFL score of at least 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, if required. An interview with a member of the selection committee is strongly recommended.

Applicants must obtain and file an application form with the program director in addition to the regular college admission application; both are available online.

Selection of applicants will be based on a faculty committee review of the following: the applicant's creative portfolio, evidence of the applicant's interest in collaborative creative production, letters of reference indicating significant artistic promise, artistic background and experience, and the applicant's interview (if conducted).

A committee chaired by the Program Director will review all applications and make admission decisions based on the criteria stated above.

Students should note additional requirements found in the sections "Admission" and "Academic Regulations and Procedures."

Degree requirements

Students pursuing the M.F.A. will complete a total of 46 credits and a significant thesis production which is a collaboration with at least one other matriculated student.

The following courses are required:
PIMA 7010G, PIMA 7020G, PIMA 7030G, PIMA 7210G, PIMA 7220G, PIMA 7230G, PIMA 7240G, PIMA 7321G, PIMA 7322G.
Three additional credits of independent projects are required, taken under course numbers: PIMA 7110G, PIMA 7120G, PIMA 7130G.

Fifteen additional credits shall be chosen from selected PIMA elective courses offered by: the PIMA program; the departments of Art, Computer and Information Science, Television and Radio, Theater; and the Conservatory of Music. Permission of the PIMA director is required

To receive the Master of Fine Arts in Performance and Interactive Media Arts, students will be required to complete the program with a grade point average of 3.00 or better.

Advanced certificate program in performance and interactive media arts
HEGIS code 1004; SED program code 27812

PIMA is a three-semester, part-time, non-degree advanced certificate program providing students with training in theoretical, technical, and practical experience in the conceptualization and production of collaborative, multi-disciplinary artworks presented in performance settings. Specifically, students learn to use technology as a means of extending their personal artistic practice and facilitating cross-disciplinary artistic collaborations. Students with diverse academic, artistic, professional, and cultural backgrounds enter the program and work in collaborative groups throughout the course of study, with close mentoring by faculty members. Most students come to the program with an established career or career goal in an arts field, and generally seek to continue in that field after completing the certificate, utilizing the program for advancement and skills development. The advanced certificate is primarily intended for students already holding the highest degree available in an art-related field who wish to supplement their studies, or students who wish to continue their studies without making the time commitment required by a full-time program, such as the PIMA M.F.A. All applicants holding a graduate or undergraduate degree, however, are welcome. The program is a cooperative effort of the Brooklyn College Departments of Art, Computer and Information Science, Television and Radio, and Theater, and the Conservatory of Music. The faculty is drawn from all four departments and the conservatory.

Matriculation Requirements

Applicants must offer a graduate or undergraduate degree from an accredited college or university completed with a grade point average of 3.00 or higher. Applicants must also offer a portfolio of creative work (which may consist of work in any medium, including computer software), letters of recommendation, and TOEFL score of at least 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, if required. An interview with a member of the selection committee is strongly recommended. Matriculation is contingent upon admission to Brooklyn College.

Applicants must obtain and file an application form with the program director in addition to the regular college admission form.

Selection of applicants is based on a faculty committee review of the following: the applicant's creative portfolio, evidence of the applicant's interest in collaborative creative production, letters of reference indicating significant artistic promise, artistic background and experience, and the applicant's interview (if conducted).

Students should note additional requirements found in the sections "Admission" and "Academic Regulations and Procedures."

Certificate Requirements

Eighteen credits are required for this certificate. The following courses are required: PIMA 7010G, PIMA 7020G, PIMA 7030G.

Nine additional credits shall be chosen from selected PIMA elective courses offered by the PIMA program; the Departments of Art, Computer and Information Science, Television and Radio, and Theater; and the Conservatory of Music. Permission of the PIMA director is required.

To receive the Advanced Certificate in Performance and Interactive Media Arts, students will be required to complete the program with a grade point average of 3.00 or better and have completed no more than three credits (one course) with a grade less than B.

Courses

PIMA 7010G Sound, Image, Space, and Performance; Interactive Media Programming I
30 hours lecture, 45 hours lab; 3 credits
Combines performance/electronic media production, collaboration theory, and lab in interactive media programming. Projects include collaborative performing arts production, and interactive programming projects. Open only to PIMA students.

PIMA 7020G Artistic Process and Contemporary Community: Interactive Media Programming II
30 hours lecture, 45 hours lab; 3 credits
Combines community-based arts theory, collaborative performing arts production in a community venue, and a lab in interactive media programming. Projects include collaborative community production and interactive programming projects. Open only to PIMA students.

Prerequisite: PIMA 7010G [701G] or permission of the director.

PIMA 7030G Collaborative Interactive Media Performance
45 hours lecture; 3 credits
Development, realization, and documentation of culminating collaborative PIMA project.

Prerequisite: PIMA 7020G [702G] or permission of the director.

PIMA 7040G Independent Investigations in Interactive Media
45 hours lecture; 3 credits
Directed study in advanced electronic media research or production. Permission of the director of PIMA (and the chair of the instructor's department if the instructor is not PIMA faculty) required. This course may be repeated for credit.

Prerequisite: PIMA 7010G [701G] or permission of the director.

PIMA 7110G Independent Projects
5 hours, meetings plus independent work; 1 credit
Directed study in advanced electronic media research or production. Permission of the director of PIMA (and the chair of the instructor's department if the instructor is not PIMA faculty) required. This course may be repeated for credit.

Prerequisite: permission of the director.

PIMA 7120G Independent Projects

10 hours, meetings plus independent work; 2 credits
Directed study in advanced electronic media research or production. Permission of the director of PIMA (and the chair of the instructor's department if the instructor is not PIMA faculty) required. This course may be repeated for credit.

Prerequisite: permission of the director.

PIMA 7130G Independent Projects

15 hours, meetings plus independent work; 3 credits
Directed study in advanced electronic media research or production. Permission of the director of PIMA (and the chair of the instructor's department if the instructor is not PIMA faculty) required. This course may be repeated for credit.

Prerequisite: permission of the director.

PIMA 7210G History, Theory, and Criticism

45 hours; 3 credits
Overview of the history, theory, and criticism of contemporary collaborative perfromance media, including music, theater, dance, radio, performance art, and other forms. Emphasis on investigation of collaborative process, community involvement, and use of technology. Both the creation and presentation of the works will be studied. Extensive research, interviews, and field work.

Prerequisite or corequisite: PIMA 7010G [701G] or permission of the director.

PIMA 7220G Teaching Practicum

30 hours lecture, 45 hours practical training; 3 credits
Immersive practical university-level teaching course designed for students in terminal degree programs. Syllabus and course schedule design, development of assignments, research, preparation for lectures, and preparation of class materials. Evaluation and outcomes assessment, development of teaching style and classroom personality.

Prerequisite or corequisite: PIMA 7010G [701G] or permission of the director.

PIMA 7230G Thesis Seminar I

45 hours lecture; 3 credits
Pre-production of collaborative M.F.A. thesis project, including collaborative group formation, script and/or score development, research, design, technical development documentation planning, and venue research. Community outreach, web presence, grant writing, and publicity.

Prerequisite or corequisite: PIMA 7020G [702G] or permission of the director.

PIMA 7240G Thesis Seminar II

45 hours lecture and independent work; 6 credits
Production of collaborative M.F.A. thesis project, including production planning and scheduling, rehearsals, design realization, technical realization, documentation, publicity, venue relationship development, community outreach, and personnel management.

Prerequisite or corequisite: PIMA 7230G [723G].

PIMA 7311G Experimental Performance Ensemble

30 hours rehearsal; 1 credit
Participation in an ensemble consisting of artists from all performance media dedicated to creating, rehearsing, and performing works by its members, and developing a repertoire of experimental multimedia works. At least one public performance per semester. Permission of the director of PIMA required. This course may be repeated for credit.

Prerequisite or corequisite: permission of the director.

PIMA 7312G Experimental Performance Ensemble

30 hours rehearsal; 1 credit
Participation in an ensemble consisting of artists from all perfromance media dedicated to creating, rehearsing, and performing works by its members, and developing a repertoire of experimental multimedia works. At least one public performance per semester. Permission of the director of PIMA required. This course may be repeated for credit.

Prerequisite or corequisite: permission of the director.

PIMA 7321G Experimental Performance Ensemble and Composition

30 hours rehearsal plus independent work; 2 credits
Participation in and contribution of new works to an ensemble consisting of artists from all performance media dedicated to creating, rehearsing, and performing works by its members, and developing a repertoire of experimental multimedia works. At least one public performance per semester. Permission of the director of PIMA required. This course may be repeated for credit.

Prerequisite or corequisite: PIMA 7010G [701G] or permission of the director.

PIMA 7322G Experimental Performance Ensemble and Composition

30 hours rehearsal plus independent work; 2 credits
Participation in and contribution of new works to an ensemble consisting of artists from all performance media dedicated to creating, rehearsing, and performing works by its members, and developing a repertoire of experimental multimedia works. At least one public performance per semester. Permission of the director of PIMA required. This course may be repeated for credit.

Prerequisite or corequisite: PIMA 7010G [701G] or permission of the director.

PIMA 7331G Experimental Performance Ensemble Direction

30 hours rehearsal, plus ensemble direction; 3 credits
Direction of, participation in, and contribution of new works to an ensemble consisting of artists from all performance media dedicated to creating, rehearsing, and performing works by its members, and developing a repertoire of experimental multimedia works. At least one public performance per semester. Permission of the director of PIMA required. This course may be repeated for credit.

Prerequisite or corequisite: permission of the director.

PIMA 7332G Experimental Performance Ensemble Direction

30 hours rehearsal, plus ensemble direction; 3 credits
Direction of, participation in, and contribution of new works to an ensemble consisting of artists from all performance media dedicated to creating, rehearsing, and performing works by its members, and developing a repertoire of experimental multimedia works. At least one public performance per semester. Permission of the director of PIMA required. This course may be repeated for credit.

Prerequisite or corequisite: permission of the director.

PIMA 7741G Dynamic and Interactive Media Performance I

30 Lecture Hours and 30 Lab Hours; 3 credits
In-depth study of tools and techniques for designing dynamic and interactive multimedia systems for use in live performance situations. Emphasis will be on student creation of custom computer software to realize interactive projects. Video, audio, three-dimensional computer images, and alternative computer-human interfaces will be addressed. Extensive instruction in graphical computer programming; no experience required.

Prerequisite: PIMA 7010G [701] or permission of the director.

PIMA 7742G Dynamic and Interactive Media in Performance II

30 Lecture Hours and 30 Lab Hours; 3 Credits
Continuation of PIMA 774.1. In-depth study of tools and techniques for designing dynamic and interactive multimedia systems for use in live performance situations. Emphasis will be on student creation of custom computer software to realize interactive projects. Video, audio, three-dimensional computer images, and alternative computer-human interfaces will be addressed. Extensive instruction in graphical computer programming.

Prerequisite or co-requisite: PIMA 7741G [774.1] or permission of the director.

PIMA 7990G Special Topics in Performance and Interactive Media

45 hours lecture; 3 credits
Special topics in performance and interactive media research or production. Course descriptions vary by semester. This course can be repeated for credit. Permission of the director of PIMA required.

Prerequisite: permission of the director.

Philosophy

Department office: 3308 Boylan Hall
Phone: 718.951.5311

Full-time Faculty

Professors: Chopra, Lurz, Moore, Nuzzo
Associate Professors: Arlig, Campos, Khader, Steinberg, Trivedi, Vitrano
Assistant Professors: Gotlib, Menser, Shottenkirk
Lecturers: Karanja, Repetti

The Department of Philosophy acquaints students with the variety of viewpoints in historical and current philosophical literature on fundamental, perennial questions concerning morality, ethics, knowledge, and aesthetics as well as the concepts, theories, methodologies, and moral issues of the natural sciences, social sciences, arts, and professional areas, and the areas of logic, epistemology, and metaphysics.

CUNY Ph.D.

The City University of New York offers a master of arts degree program in philosophy and a doctoral program in philosophy. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Philosophy Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Philosophy Department and the executive officer of the doctoral program. The following courses are offered as electives for students in other fields.

Courses

Students may apply graduate or undergraduate courses toward fulfillment of prerequisites.

PHIL 7316X Bioethics

45 hours; 3 credits
Critical examination of ethical issues that confront health care providers, patients, and research biologists. Moral foundations of decision making. Case studies and source readings. Classical and contemporary philosophers.

PHIL 7325X Values in the Modern World

45 hours; 3 credits
Philosophical examination of values in general and of different kinds of values (intellectual, aesthetic, religious, moral, social) as they are found in the modern world, with emphasis on contemporary American life. (Not open to students who have completed a course in theory of value.)

Prerequisite: a course in philosophy or permission of the chairperson.

PHIL 7512X Philosophy of Music

45 hours; 3 credits
Critical examination of philosophical issues pertaining to music. Consideration of such issues as: the definition or concept of music, the ontology of music, musical meaning and understanding, musical expressiveness and arousal, musical representation, musical performance and authenticity of performance, the power and value of music, and the aesthetics of jazz, rock, and popular music. Classical and contemporary philosophers. This course is the same as Music U7643X [764.3X].

Prerequisite: one course in philosophy or one course in music or permission of the chairperson of Philosophy or Music.

PHIL 7805G Special Studies in Ethics, Aesthetics, or Philosophy of Law, History, the State or Religion

30 hours plus conference; 3 credits
Topics vary from term to term.

Prerequisite: a course in philosophy.

PHIL 7820G Seminar in Ethics, Aesthetics, or Philosophy of Law, History, the State or Religion

30 hours plus conference; 3 credits
Topics vary from term to term.

Prerequisite: a course in the subject of the seminar.

Physics

Department office: 3438 Ingersoll Hall
Phone: 718.951.5418

Full-time Faculty

Professors: Bond, Franco, Sahni, Schwartz, Shum, Tomkiewicz, Tung
Associate Professors: Boutis, Miyano, Nakarmi
Assistant Professors: Giovambattista, Sandeman, Suarez

The Department of Physics prepares students to enter into the mainstream of contemporary physics by providing them with an opportunity to pursue original research. Students in the program receive a sound background in the fundamentals of physics through intensive course work in core subjects as well as an opportunity to develop individual interests through a selection of modern electives.

M.A. degree program in physics
HEGIS code 1902; SED program code 02068

The study of physics provides a foundation in fundamental science and develops skill sets that are highly valued in virtually every profession. The M.A. in physics program prepares students for admission to doctoral programs in physics or closely related fields such as astronomy, biophysics, medical physics, materials science, and engineering. For students who do not intend to pursue a doctorate in physics, the program provides a strong background in problem-solving through the application of physics, mathematics, and quantitative reasoning that can be extremely useful in a variety of professions, including business, finance, law, and medicine, as well as applied physics. For all students, the program also affords an opportunity to gain research experience.

Standard physics sequence

This sequence is the traditional course of study intended for students who are likely to continue on to the Ph.D. degree in physics.

Matriculation requirements

Applicants must offer at least 12 credits in physics beyond general physics and at least 9 credits in mathematics beyond elementary integral calculus.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty credits are required for the degree.

Students must complete 22 credits in courses in the Physics Department. The following courses are required: Physics 7210X, 7310X, 7350X, 7410X, and 7710X. In exceptional cases, the graduate physics committee may waive required courses or prerequisites.

With permission of the committee, the remaining credits required for the degree may be in courses in any department.

If they have been completed with a grade of B or higher and have not been counted toward the undergraduate degree, physics courses numbered 4100-4900 in the -Brooklyn College Undergraduate Bulletin corresponding to U600 courses in the City University Graduate Bulletin, or their equivalent, may be offered toward the master's degree.

Students must pass a comprehensive examination or submit a thesis, the choice to be made in consultation with the deputy chairperson. The first doctoral examination of the CUNY Ph.D. program may be substituted for the comprehensive examination. Students who choose to write a thesis must take a course or courses in the series Physics 7110G-7120G. No more than 4 credits in this series may be offered toward the degree. Information about requirements for the comprehensive examination and thesis is in the section "Academic Regulations and Procedures."

Graduate courses in the Physics Department offered toward the degree must be 7000-level courses.

The program of study must be approved by the graduate physics committee.

M.A. degree program in education: physics teacher (7-12)
HEGIS code 1902.01; SED program code 26762

The M.A., physics teacher program prepares students for a career in teaching at the high school level. It includes courses in education, as well as physics, which are designed to help graduate students become more effective high school physics teachers. The courses required by the

Department of Secondary Education vary depending on the entry qualifications of students.

The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the Head of the program in adolescence science education for the current requirements.

Matriculation requirements

Applicants must offer at least 12 credits in physics beyond general physics.

Applicants must also offer (a) or (b):

(a) New York State Initial Certification in physics for grades 7-12; or courses in education or equivalent course work and teaching experience that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching physics in grades 7-12; 100 hours of fieldwork; 40 full days or 300 hours of student teaching of physics in grades 7-12, or one year of full-time teaching of physics in grades 7-12; passage of edTPA.

(b) an undergraduate degree with a major in physics or appropriate course work in physics.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) before being considered for admission. For more updated and complete information on minimum passing scores see the section on additional admission requirements for students with international credentials in the Graduate Bulletin or the program web page. At the discretion of the program, additional English courses may be required as a condition for admission.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the Head of the program in adolescence science education in the School of Education and the chairperson of the Physics Department.
Applicants must consult matriculation requirements for adolescence education and special subjects in the School of Education section of the Bulletin, and should see the Head of the program in adolescence science education for counseling.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

A minimum of thirty credits is required for the degree.

Students must complete 12 credits in courses in the Physics Department including 6 credits in courses on the 7000 level.
Students must also complete either Option A or B below. With the approval of the science education program head, students enroll in the appropriate Option A or Option B based upon teaching experience, previous course work, and the teaching certificates they hold.

Option A (for in-service teachers): 30 credits
This option is for students who possess an New York State Initial Certification in teaching physics grades 7-12, or its equivalent.
Students must complete 12 credits in courses in the Department of Secondary Education. Students take different education courses and sequences of courses depending on their previous course work, teaching experience, and the certificates they hold. Students who possess Initial Certification in teaching physics must complete all of the following:
SEED 7502T or SEED 7324X, SEED 7500X or SEED 7315X, SEED 7340T or SEED 7320T, and SEED 7503X or SEED 7038X or SEED 7325X.
Six credits of electives. These courses may be in education and/or in related science content.

Option B (for pre-service teachers):30-40 credits
Students who do not possess Initial Certification in teaching physics or equivalent course work and teaching experience or who are teaching but do not possess Initial Certification in teaching physics must have the appropriate course work and credits in the subject area and must complete appropriate courses in (a), (b) and (c) below:
(a) SEED 7500X or SEED 7315X, SEED 7501X or SEED 7314X, SEED 7502T or SEED 7324X, SEED 7503X or SEED 7325X, SEED 7340T or SEED 7320T.
(b) SEED 7380T, SEED 7381T, SEED 7383T, SEED 7542T, SEED 7543T.
(c) SEED 7671X.

Students who wish to register for student teaching seminar and field placement in the science education program will need to file an application with the science education program head for permission. See program office for details.
Students must pass a comprehensive examination or submit a thesis acceptable to the Department of Physics, the choice to be made in consultation with the deputy chairperson of the Physics Department. Information about requirements for the comprehensive examination and the

thesis is in the section "Academic Regulations and Procedures."

The program of study must be approved early in the first semester by the chairperson or deputy chairperson of the Physics Department and the Head of the program in adolescence science education in the School of Education.

CUNY Ph.D. in physics

The City University of New York offers a doctoral program in physics. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School."
The Physics Department at Brooklyn College is a full participant in the Ph.D. program. It offers a complete Physics sequence of courses that are creditable toward the CUNY doctoral degree, and a wide range of research opportunities in fulfillment of the doctoral dissertation requirements for that degree. For information about the courses, students should consult the graduate deputy chairperson of the Physics Department and the executive officer of the Ph.D. program in physics.

Honor Society

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

Courses

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

PHYS 7110G Thesis Research

30 hours; 2 credits
Research for master's thesis supervised by a faculty member. No more than 4 credits may be counted toward the degree. Credit is not earned until the thesis is accepted.

PHYS 7120G Thesis Research

30 hours; 2 credits
Research for master's thesis supervised by a faculty member. No more than 4 credits may be counted toward the degree. Credit is not earned until the thesis is accepted.

PHYS U7210X Mathematical Methods in Physics I

45 hours plus conference; 4 credits
Topics in complex variables. Perturbation and variational methods for solution of differential equations. Green's functions. Eigenfunction expansions. Integral transforms. Integral equations. Differential equations. Linear algebra. Hilbert space. Tensor analysis. Group theory. Higher algebra. Numerical methods for solving equations.

Prerequisite: a course in analytical mechanics.

PHYS U7220X Mathematical Methods in Physics II

45 hours plus conference; 4 credits
Continuation of Physics U7210X [701X].

Prerequisite: Physics U7210X [701X].

PHYS U7310X Analytical Dynamics

45 hours plus conference; 4 credits
Linear vector spaces. Small oscillations. Rigid bodies, including Euler's angles. Hamiltonian theory, including Hamilton's principle, Hamilton's equations, contact transformations. The Hamilton-Jacobi method; infinitesimal contact transformations; further development of transformation theory; special applications. Continuous media and fields. Introduction to special relativity theory.

PHYS U7350X Electromagnetic Theory I

45 hours plus conference; 4 credits
Electrostatics, magnetostatics, boundary value problems. Maxwell's equations. Multipole radiation. Radiation from accelerated charges. Scattering theory. Special theory of relativity.

Prerequisite: Physics U7210X [701X] and U7310X [U711X]; or an introductory course in electromagnetic theory.

PHYS U7360X Electromagnetic Theory II

45 hours plus conference; 4 credits
Continuation of Physics U7350X [715X].

Prerequisite: Physics U7350X [715X].

PHYS U7410X Quantum Mechanics I

45 hours plus conference; 4 credits
Historical foundations. The Schrodinger formulation. Wave packets and uncertainty principle. Harmonic oscillator and potential barrier problems. WKB approximation. Operators and eigenfunctions. 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.

Prerequisite: a course in mathematical methods in physics.

PHYS U7420X Quantum Mechanics II

45 hours plus conference; 4 credits
Continuation of Physics U7410X [725X].

Prerequisite: Physics U7410X [725X].

PHYS 7450X Statistical Mechanics

60 hours; 4 credits
Topics include Laws of Thermodynamics; Relationship between Statistics and Thermodynamics; Ensemble Theory; Microcanonical, Canonical, and Grand Canonical Ensembles; Quantum Statistics; Boltzmann Statistics, Fermi-Dirac Statistics, and Bose-Einstein Statistics;

the ideal gas in the "classical" limit; Ising model; and Critical Phenomena.

PHYS U7510X Atomic Physics

45 hours plus conference; 4 credits
Spin systems, angular momentum, spectra. Atomic beam resonance, nuclear magnetic resonance (NMR), electron paramagnetic resonance (EPR), optical pumping, scattering, lasers.

Prerequisite: Physics U7360X [716X] and U7410X [U725X].

PHYS U7520X Nuclear Physics

45 hours plus conference; 4 credits
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.

Prerequisite: Physics U7410X [725X].

PHYS U7530X Particle Physics

45 hours plus conference; 4 credits
Pi mesons, pion-nucleon scattering, resonances. 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, TCP. Weak interactions of pions and kaons. Coherent regeneration. Conserved vector current. Leptonic decays of baryons and nonleptonic decays.

Prerequisite: Physics U7520X [735X].

PHYS U7560X Solid-state Physics

45 hours plus conference; 4 credits
Principles of crystallography: crystal structure, lattice vibrations, band theory, defects. Ionic crystals; dielectrics; magnetism; free electron theory of metals and semiconductors.

Prerequisite: Physics U7410X [725X].

PHYS U7580X Astrophysics

45 hours plus conference; 4 credits
Interstellar medium. Gaseous nebulae and dust clouds. Stellar atmosphere and stellar interiors. Stellar spectra, energy transfer, opacity. Nuclear reactions and matter under extreme conditions. Stellar evolution; synthesis of chemical elements; neutrino processes; radio astronomy.

Prerequisite: an introductory course in modern physics.

PHYS 7650X Physics and Society

45 hours; 3 credits
Technical quantitative study of topics related to society such as Gini Coefficients, tipping points, climate sensitivity, demographic distribution, frequency of extreme events; nuclear energy, prospects in fission and fusion; environmental problems; renewable energy sources, such as solar and wind power, energy storage.

Prerequisites: Good standing in the Physics Master's program or permission of the chairperson.

PHYS U7710X Graduate Physics Laboratory

45 hours; 2 credits
Advanced experimental work in one or more fields of physics. Planning experiments. Design and construction of apparatus. Evaluation of experimental results in the fields of optics and X rays, electronics, atomic and nuclear physics. Students may take this course twice but may not repeat topics. (Not open to students who have completed the same topic in Physics U772X.)

PHYS 7750X Introductory Laboratory Research

30 hours; 2 credits
Intended for students who want to explore the feasibility of different research problems before choosing a thesis topic.

Prerequisite: permission of the deputy chairperson.

PHYS 7755X Introductory Laboratory Research

30 hours; 2 credits
Intended for students who want to explore the feasibility of different research problems before choosing a thesis topic.

Prerequisite: permission of the deputy chairperson.

PHYS 7810X Advanced Study

30 hours; 2 credits
Tutorial study with a faculty member in an area in which formal course work is not offered.

Prerequisite: permission of the deputy chairperson.

PHYS 7820X Advanced Study

30 hours; 2 credits
Tutorial study with a faculty member in an area in which formal course work is not offered.

Prerequisite: permission of the deputy chairperson.

The following inactive course(s) will only be offered if there is sufficient demand:

PHYS 7011T Physics for Junior High School I
PHYS 7012T Physics for Junior High School II
PHYS 7013T Physics for Junior High School III
PHYS 7020T Concepts and Theories of Modern Physics
PHYS 7025T Modern Topics in Physical Science
PHYS 7030X Biomechanics
PHYS 7035X Electronics
PHYS 7040X Advanced Optics

Political Science

Department office: 3413 James Hall
Phone: 718.951.5306

Full-time Faculty

Distinguished Professor: Theoharis
Professors: Currah, Ness, Okome, Robin, Theoharis, Ungar, Wilson
Visiting Professors: Featherstone, Wypijewski
Associate Professors: Alonso, Arnold, Estey, Johnson, Law, London, Su
Assistant Professors: Go, Ha, Path

The Department of Political Science explores the political, economic, and social issues that comprise and affect both the domestic and foreign arenas at many levels, from individual people and single countries to groups of countries that are joined for various purposes or geographically related. Study integrates academic rigor with real-world experience to learn the structure and operation of politics and power. Students learn to appraise, analyze, and research information within the context of both contemporary and historic periods. A political science degree provides a basis for many career options in government, international affairs, public education, and the private sector.

M.A. degree program in political science
HEGIS code 2207; SED program code 02108

The political science master's program offers students a choice of three concentrations: political science, international affairs, or urban policy and administration.

The political science concentration combines the theories and methodologies of political science with the opportunity to specialize in one of four fields: American politics, comparative politics, political theory, or international relations.

The international affairs concentration is designed to prepare students for professional and academic careers in international affairs through programs of study tailored to their specific interests and goals. Courses range from broad overviews to seminars on specific world regions, and are combined with independent study and master's thesis courses in close collaboration with faculty members. To foster professional preparation, the program also publishes student work in the department's Political Science Journal and places students in internships as well as study and work opportunities abroad.

In the urban policy and administration masters program, students develop skills in understanding politics and public policy processes in the US metropolis, including New York City. While enrolled in this program that champions the collaborative production of cutting-edge theoretical work and real-world practice, students are expected to be intellectual leaders in policy-relevant fields in urban settings: labor, race, ethnicity, and immigration, urban planning, local elections, public education, and so on. Graduates find professional opportunities in government agencies, non-profit organizations, community-based organizations, and labor unions. Alumni have also pursued careers in electoral politics. For many students, the master's degree in this program serves as a step toward a higher academic degree such as a Ph.D. and J.D. A wide range of internships are available.

Matriculation requirements

Admission is highly competitive; decisions are based on GPA, recommendation letters, personal statement, and relevant experience. General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Students choose one of the following three concentrations: Political Science, International Affairs, or Urban Policy and Administration.

I. Political Science: The requirements for the concentration are:

1. Credits: Thirty credits, all from 7000-level courses. With the permission of the deputy chairperson, a maximum of 12 credits (four courses) may be transferred from graduate courses in other departments or other universities to substitute for any requirement below.

2. Distribution: Courses are grouped into four main areas of study: American government (Political Science 7200X-7570X),comparative politics (Political Science 7712X-7891X), international relations (Political Science 7600X-7691X), and political theory (Political Science 7010X-7190X, excluding 7000X and 7170X). A minimum of 9 credits must be from one of these areas, which will be the student's specialization, and a minimum of 3 credits from each of the other three areas. Note: The statistics course (Political Science 7000X) does not count for the political theory requirement.

3. Statistics/Methodology or Language: Students must either take an approved course in statistics or methodology, in political science or another graduate program, or pass a language examination in a major language approved by the deputy chairperson other than the student's native language. Three credits are given for a statistics or methodology course; no credits are given for the language examination.

4. Comprehensive Examination or Thesis: After completing a minimum of 21 credits, students must either take a comprehensive examination or write a thesis. The examination consists of two essay questions: one in the student's area of specialization and one in any other area. Students have a choice of questions in each area but must pass both to pass the examination. No credits are given for the comprehensive examination. The thesis, taken as Political Science 7910G for 3 credits, consists of a sixty-page original research project. The thesis process, beginning with a proposal submitted to the department, is described in the Thesis Guidelines on the program website, http://www.brooklyn.cuny.edu/pub/departments/gradpolisci/

II. International Affairs: The requirements for the concentration are:

(1) Courses: Eleven 7000-level courses (33 credits) with the following distribution:

1. Modern International Politics (Political Science 7610X) and at least two other international affairs courses (Political Science 7600X-7691X).
2. Comparative Politics (Political Science 7720X) and at least two other Comparative Politics courses (7770X - 7891X);
3. Statistics (Political Science 7000X or equivalent in other departments) or Methodology (Political Science 7160X);
4. One of the following four choices, a) - d):
a) Political Theory - one course chosen from Political Science 7010X-7190X, excluding 7170X;
b) International Internship (Political Science 7950G);
c) Independent Study (Political Science 7940X);
d) Master's Thesis (Political Science 7910G) (see description above).
5. Three electives: any courses from the political science graduate program.

With department approval, up to 12 credits (four courses) from other departments or graduate programs may substitute for any requirement(s) above.

(2) Examinations: Students take a pass/fail comprehensive exam and a foreign language examination.

III. Urban Policy and Administration: The requirements for the concentration are:

(1) Courses: Eleven 7000-level courses (33 credits) with the following distribution:

1. Political Science 7000X, Statistics in Political Science
2. Political Science 7400X, Public Administration
3. Political Science 7480X, Planning for Metropolitan Areas
4. Political Science 7510X, Government of New York City/Urban Politics
5. Political Science 7570X, Racial and Ethnic Politics in the United States
6. One of the following three choices, a)- c):
a) Political Science 7450G, Fieldwork/Internship
b) Political Science 7910G, Master's Thesis
c) Political Science 7940X, Independent Study
7. Five electives: any courses from the political science graduate program.

(2) Examinations: Students take a pass/fail comprehensive exam.

With department approval, a maximum of nine 9 credits from other departments or graduate programs may substitute for any requirement(s) above.

CUNY Ph.D.

The City University of New York offers a doctoral program in political science. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Political Science Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Political Science Department and the executive officer of the doctoral program.

Courses

Registration for courses numbered 7000 and higher requires matriculation in the Political Science M.A. program, a nonmatriculated or provisional status in the Political Science Program, or permission of the chairperson or deputy chairperson.

Political theory

POLS 7000X Statistics in Political Science

45 hours; 3 credits
Overview of statistical analysis in political science. Application of probability theory, inferential statistics, and use of statistical techniques in such areas as public opinion, voting and legislative behavior, and

comparative politics. Regression analysis and quantitative applications of social science census data on issues such as class, labor, and race.

POLS 7010X Ancient and Medieval Political Thought

30 hours plus conference; 3 credits
Analytical and historical examination of principal political thinkers from Plato through Machiavelli. Topics to be considered include: the role of virtue and political participation; classical theories of democracy, aristocracy, and monarchy; the Christian critique of ancient politics; the breakdown of the Christian worldview; the rise of modernity. Theorists may include Plato, Aristotle, Augustine, Aquinas, Al-Farabi, Maimonides, and Machiavelli.

POLS 7020X Modern Political Thought

30 hours plus conference; 3 credits
Analytical and historical examination of principal political thinkers from the sixteenth century through the nineteenth century. Topics to be considered include: the rise of liberalism and radical democratic theory; the conservative critique of revolutionary politics; the idea of rights and toleration; the rise of capitalism and Marxist criticism; the impact of Nietzsche. Theorists may include Hobbes, Locke, Rousseau, Wollstonecraft, Smith, Tocqueville, Marx, and Nietzsche.

POLS 7030X American Political Thought

30 hours plus conference; 3 credits
An introduction to the development and evolution of American political ideas and what they mean for America. Topics to be covered include: revolution and constitutionalism; capitalism, liberty and equality; social Darwinism and industrial capitalism; social democracy and neoconservatism; feminism, racism, and multiculturalism.

POLS 7040X Counter-Revolution

30 hours plus conference; 3 credits
Studies the origins and nature of counterrevolutionary thinking and politics. Focuses on counterrevolutionary hostility to progressive politics-whether liberal, democratic, or revolutionary. Examines the role of counterrevolutionary arguments in contemporary American politics.

POLS 7050X Fear in Politics

30 hours plus conference; 3 credits
Examines the role of fear in politics. Readings from political theory (e.g., Hobbes, Montesquieu,Tocqueville, Arendt, Focault), literature (e.g., Brecht, Solzhenitsyn, Kafka), and history. Focus on relationship between fear and the state, civil society, the workplace, and other private spheres. Case studies from the United States, Latin America, Soviet Union, and Nazi Germany.

POLS 7060X Biopolitics

30 hours plus conference; 3 credits
Investigation into the state's role in fostering the safety and welfare of its population. Examination of technologies of power for governing the life, health, and death of populations. Exploration of the theories of biopolitics and governmentality and their application to particular institutions and discourses such as public health, immigration, surveillance, risk assessment, and security. Exposure to different forms of critical analysis.

POLS 7100X Twentieth-Century Political Thought

30 hours plus conference; 3 credits
Examination of leading schools of political thought in the twentieth century, including Marxism, liberalism, democratic theory, feminism, and poststructuralism. Particular focus on the nature of the state; the status and definition of rights; the tension between participation and individualism; the nature of class power and gender relations; the problems of imperialism and postcolonialism.

POLS 7140X Theory of Anti-Capitalist Movements

30 hours plus conference; 3 credits
Various theories of socialism and communism. Marx and the Marxists. Non-Marxist socialist thought. The course will examine the relationship between changing theoretical doctrines and political movements. Possible topics to be discussed include: the genesis of worker consciousness; the role of internal democracy in mass movements; the state of anticapitalist thinking and movements today.

POLS 7150X Organization Theory

30 hours plus conference; 3 credits
Theories of organization. Problems regarding public organizations. Concepts of authority, hierarchy, status, leadership.

POLS 7160X Methodology: Empirical Political Science

30 hours plus conference; 3 credits
Uses of quantitative methods in political research. Methodological issues such as factor analysis, interview design, survey research, content analysis, probability theory, simulation, and game theory. Implications for theory building in political science.

POLS 7170X Master's Seminar

30 hours plus conference; 3 credits
A guided research experience designed to allow students to conceptualize, organize, and complete a major policy paper. Class sessions will focus on problem identification and issues involving policy analysis. Students will be required to identify a policy problem, choose an applicable model for evaluating the problem, and complete a thirty- to forty-page policy paper containing a series of policy recommendations. Labor topics and labor-oriented policy analysis will be encouraged. Students will submit various pieces of the project according to a prearranged schedule. The class will be organized as a workshop to provide systematic feedback and direction of the various papers.

Prerequisite or corequisite: completion of 24 credits with a B average.

POLS 7180X Ethics and Politics

30 hours plus conference; 3 credits
Ethical issues as they arise within the context of government and politics with the aim of improving students' ability to think ethically about the means and ends of public policy and the behavior of public officials. Such topics as the following will be addressed: the use of deception in public life; the use of citizens as a means to governmental policy and the moral accountability of individual public officials; whistleblowing; and the ethical components in assessing such objectives of government as: distributive justice, equal opportunity, and nuclear deterrence.

POLS 7181X Politics and Religion

30 hours plus conference, 3 credits
Critical examination of major issues in politics and religion including the relationship between religion and/or church and state, theories of

modernity and secularization, law, morality, social justice, various conceptions of the public and the private. The role of religion in domestic and world politics. Study of methodological approaches to relationship of politics and religion, empirical and normative.

POLS 7182X Islam and Modernity

30 hours plus conference, 3 credits
Role of discourse and power in the constitution of identity and politics. Binary relationship between power/knowledge, local/universal, inclusion/exclusion, religion/secular, rational/irrational, Islam/modernity. Political and social theories that deal with modernity, postmodernity, language, gender, race, class, and ethnicity in the formation of identities and practices.

POLS 7190X Selected Topics in Political Theory

30 hours plus conference; 3 credits
Topic varies from term to term. Students may take this course four times, but may not repeat topics. (Not open to students who have completed the same topic in Political Science 719.2X, 719.3X, or 719.4X.)

American government

POLS 7200X U.S. Constitutional Law I

30 hours plus conference; 3 credits
Relation of the judicial process and constitutional law to the political process in the United States. Judicial review; federalism. Separation and delegation of powers.

POLS 7210X U.S. Constitutional Law II

30 hours plus conference; 3 credits
Civil liberties; civil rights; due process; equal protection of the laws.

POLS 7220X Criminal Justice and Public Policy

30 hours plus conference; 3 credits
An analysis will be made of criminal justice decision making and crime policy by exploring contemporary empirical research. Institutions covered will include the police department, bar associations, the courts, and correction agencies. Crime control strategies to be analyzed include: deterrence, incapacitation, rehabilitation, decriminalization, diversion, and fortressing. Specific examples of actual or proposed policies to be studied are reduction of plea bargaining, mandatory imprisonment, elimination of parole, saturation policing, and capital punishment.

POLS 7240G Computer Applications in Political Science

30 hours plus conference; 3 credits
Current use and potential applications of computers in political science. Emphasis on urban problems.

POLS 7300X U.S. Party System

30 hours plus conference; 3 credits
The nature and function of U.S. political parties and interest groups and their growth and decline; the electoral process, organization and leadership, decision making; labor in the two-party system; labor and working-class electoral tendencies; labor and independent politics.

POLS 7310X Policy Formulation in U.S. Government

30 hours plus conference; 3 credits
The changing nature of federalism and of the separation of powers as related to major problems facing the United States.

POLS 7320X The Presidency in the United States

30 hours plus conference; 3 credits
The presidency as an office of national and international leadership.

POLS 7330X The Legislative Process in the United States

30 hours plus conference; 3 credits
The function of Congress and state legislatures. Bases of representation. Internal politics. Procedures. Interest groups. Controls.

POLS 7340X Policy Analysis

30 hours plus conference; 3 credits
Current problems, prospects, and projections of policy analysis in education, health, poverty, welfare, planning, urban renewal, police and law enforcement, and metropolitanization.

POLS 7350X Politics and Public Opinion Formation

30 hours plus conference; 3 credits
The role of public opinion in different political systems. Formation of opinion. Political socialization; interest and pressure groups. Leaders and political behavior. Mass communications media.

POLS 7360X The Politics of the American Labor Movement

30 hours plus conference; 3 credits
The influence that trade unions have in the political process (elections, parties, the legislature, and the courts) and the importance of state intervention to union organization and political power. Leading theories on union goals and relationship to the political system will be analyzed. Also covered will be specific policy objectives pursued by unions: e.g., health, safety, and welfare policies; employment security and labor relations policies; affirmative action and economic restructuring policies.

POLS 7370X Policy Evaluation

30 hours plus conference; 3 credits
The nature, purposes, and methodology of policy evaluation. The relationship between policy evaluation and policy analysis. Description and differentiation of summative, goal-free, utilization-focused, formative, and cost- effectiveness evaluation. Analysis of various kinds of experimental, quasi-experimental, reflexive, process, and cost-effectiveness research designs for policy evaluation. Diagnosis of validity problems associated with each design.

POLS 7400X Public Administration

30 hours plus conference; 3 credits
Theories and practice of public administration. The political context of public service. Policy implementation. Organizational design. Management techniques. Budgeting. Personnel administration. Evaluation. Union administration and management, mentor servicing, labor law, public sector collective bargaining. Labor unions and local, state, and federal administrative processes.

POLS 7450G Fieldwork / Internship

3 credits
Students spend eight to 10 hours a week in a government or non-governmental agency and attend weekly seminars dealing with issues raised in their fieldwork assignments. The seminar is supervised jointly by an agency staff member and Brooklyn College faculty. Students write a paper on their work.

POLS 7470X Metropolitan Areas and Community Power Analysis

30 hours plus conference; 3 credits
The urban power structure and the metropolitan complex. Regional planning for land use and transportation. Adjustment of government services to the metropolitan, social, and economic community. Political, fiscal, administrative, legal, constitutional problems. Changes in intergovernment relations. Labor and trade union power, labor-community coalitions, metro-unionism.

POLS 7480X Planning for Metropolitan Areas

30 hours plus conference; 3 credits
The planning process in metropolitan governments. Administrative policies and machinery for dealing with regional problems. Planning problems of the New York metropolitan area.

POLS 7491X Selected Topics in American Government

30 hours plus conference; 3 credits
Topics vary from term to term. Students may take any combination of these courses for a total of 12 credits, but may not repeat topics. (Not open to students who have completed the same topic in Political Science 749.3X or 749.4X.)

POLS 7492X Selected Topics in American Government

30 hours plus conference; 3 credits
Topics vary from term to term. Students may take any combination of these courses for a total of 12 credits, but may not repeat topics. (Not open to students who have completed the same topic in Political Science 749.3X or 749.4X.)

POLS 7510X Government of New York City/Urban Politics

30 hours plus conference; 3 credits
The politics, government, administration of New York City in the context of the changing field of urban politics. Political economy; population changes; geographic differences; impact of the states and the federal government.

POLS 7550X Health Care Politics

30 hours plus conference; 3 credits
The scope and politics of government intervention in health care; topics include: national health insurance, federalism and the U.S. health-care system, the politics of professionalism, cost containment, privatization, health promotion, and reforming the health-care system. Debates over health policy will be traced historically and related to major policy models. Various approaches to the study of politics will be employed and illustrated with case studies from the health-care field.

POLS 7570X Racial and Ethnic Politics in the United States

30 hours plus conference; 3 credits
Framework for analyzing racial and ethnic politics in the United States, including historical, economic, social, as well as political factors. Topics include the civil rights movement, immigration policy, urban poverty, and contemporary debates involving racial and ethnic issues.

International affairs

POLS 7600X U.S. Foreign Policy

30 hours plus conference; 3 credits
Historical development of United States foreign policy. Policies toward each world region. Ideological and political debates over specific policies and the use of power. Domestic factors affecting the determination and conduct of U.S. foreign policy.

POLS 7610X Modern International Politics

30 hours plus conference; 3 credits
Analysis of the basic factors shaping contemporary international politics; theories and approaches to the study of international politics; patterns of relations among states and non-state actors; sources and uses of power in the global arena.

POLS 7620X International Organization

30 hours plus conference; 3 credits
Major global and regional international organizations. The United Nations system.

POLS 7630X International Law

30 hours plus conference; 3 credits
The nature, sources, development of international law. Role and function of law in international society.

POLS 7640X Global Gender Politics

30 hours plus conference; 3 credits
Study of gender politics and policy around the globe. Examination of women's citizenship and impact of gender on public policy and of public policy on gender in a range of societies. Exploration of the gendered foundations and impacts of the international processes of globalization, militarization, and democratization. Exposure to several types of political analysis such as political ethnography and feminist comparative policy.

Prerequisite: None

POLS 7650X Human Rights and World Politics

30 hours; 3 credits
Study of human rights problems and the international community's approaches to them. Examination of the history of human rights, the functioning of human rights organizations, the relationship between human rights and political systems, and patterns of rights violations against different ethnic, racial, religious, gender, and other groups.

POLS 7660X Globalization and International Cooperation

30 hours plus conference; 3 credits
Contemporary developments in economic and political globalization and in cooperation among states. Analysis of international political economy and policy, North-South relations, and trade. Examination of cooperation on human rights, war, environment, minorities, culture, migration, refugees, genocide, health, and gender.

POLS 7670X North-South Relationships in World Politics

30 hours plus conference; 3 credits
Political and economic relationships between the wealthy countries of the global north and the poorer countries of the global south. Study of trade, debt, war, history, rights, nationalism, identity, labor, environment, immigration, and the world's approaches to these problems.

POLS 7680X Global Politics and Global Climate Change

30 hours plus conference; 3 credits
Examination of how international law, organizations, and relations respond to climate change. Critical analysis of national interests, the global commons, and policy impacts.

POLS 7691X Selected Topics in International Relations

30 hours plus conference; 3 credits
Topic varies from term to term. Students may take this course four times, but may not repeat topics. (Not open to students who have completed the same topic in Political Science 769.2X, 769.3X, or 769.4X.)

POLS 7960X Professional Development in International Affairs

30 hours plus conference, 3 credits
Introduction to the Masters in International Affairs. Development of the research, analytical, and job skills necessary to succeed in the field. Discussion of the key political events of the last four decades and today that shape global politics, through the lenses of comparative politics and international relations, the two major fields of international affairs. Discussion of human rights around the world as well as human rights advocacy.

Comparative politics

POLS 7380X Politics of Technology

30 hours plus conference; 3 credits
Examination of the growing influence of technology on politics, work, consumption of information, participation as citizens. Study of technology and power relations, including effects on government, regulation, and social change. History of technological determinism; study of the theories and ideas informing conceptions of western technology. Study of a specific application in use today and its significance for politics and citizenship.

POLS 7665X Political Economy of Migration

30 hours plus conference; 3 credits
Presents the prominent themes, theoretical explanations, epochal and modern historical accounts of the political economy of migration on an international, regional, national, ethnic, and sub-national basis. Class will examine thematic and political-economic interpretations and theories of migration in the contemporary era.

POLS 7712X Politics of East Asia

30 hours plus conference each term; 3 credits each term
Study of processes of political and economic change of East Asia. Governments and institutions,
political cultures, state-society relations, a nd political leadership in East Asian countries, including
China, Japan, and Korea. Differing patterns of development, foreign policy, and security issues of region's countries.

POLS 7713X Politics of the Middle East and North Africa

30 hours plus conference each term; 3 credits each term
Study of processes of political and economic change of the Middle East and North Africa.
Comparative analysis of governments, historical change, state-society relations, conflict, political
parties, religious and ethnic politics, social movements, and leadership .

POLS 7714X Politics of Africa South of the Sahara

30 hours plus conference each term; 3 credits each term
Study of processes of political and economic change of African countries south of the Sahara.
Comparative analysis of governments, historical change, state-society relations, conflict, foreign policy, social movements, and leadership .

POLS 7716X Politics of Latin America

30 hours plus conference each term; 3 credits each term
Study of processes of political and economic change of Latin America.
Comparative analysis of
governments, historical change, state-society relations, security, economic development, social
movement, the environment, and human rights .

POLS 7720X Comparative Politics

30 hours plus conference; 3 credits
Introduction to the nature and methodology of comparative political research. Comparative study of governments from each world region. Cross-national analysis of major dimensions of the political processes, political structures, and state activities in Asia, Africa, the Americas, and Europe. Examination of the major themes of comparative politics such as democratization, nation building, ethnic conflicts, and social movements.

POLS 7730X Postcommunist Politics

30 hours plus conference; 3 credits
Examination of the history and politics of the postcommunist societies of Eastern Europe and Central Eurasia. Analysis of the major puzzles of the region: democratization, the state and revolution, class and poverty, nation-building and disintegration, gender, and globalization.

POLS 7740X The Military and Police in Politics

30 hours plus conference; 3 credits
The roles, influences, and power of military, police, and other security forces in the politics of countries around the world. Patterns in national and international policies on crime, terrorism, and military issues.

POLS 7760X Comparative Social Policy

Hours to be arranged; 3 credits
Key areas of social policy, such as welfare, healthcare, and education, from a comparative perspective. Spans continents and specific geographical regions. Focus on tensions in social policymaking.

Prerequisites and/or corequisites: none.

POLS 7770X Violence and Politics

30 hours plus conference; 3 credits

Examination of violence in the politics of each world region. Study of civil war, political conflict, civil strife, economic protest, identity-based discrimination, violent crime, vigilantism, and other forms of violence in the development of countries and their current conditions.

POLS 7775X Democratization

30 hours plus conference, 3 credits
Examination of the process of democratization. Analysis of historical developments, obstacles to consolidation, implementation of standards, institutional arrangements, and contemporary variations of constitutional rule.

POLS 7780X Political Development

30 hours plus conference; 3 credits
The concept of development as a framework for the study of politics. Basic political concepts common to developing or Third World political systems and highly developed or technologically advanced political systems. Aspects of the process of development. Characteristic problems of societies at various stages of development. Patterns of interaction between developing and industrially advanced societies. Impact of these relationships on world politics.

POLS 7790X Postindustrial Politics and the State

30 hours plus conference; 3 credits
Examination of the nature, structure, and role of the modern state in diverse advanced, industrial settings. Political, economic, and social forces impinging on the state and its capability to respond to these challenges, demands, and expectations.

POLS 7891X Selected Topics in Comparative Politics

30 hours plus conference; 3 credits
Topics vary from term to term. Students may take this course four times, but may not repeat topics. (Not open to students who have completed the same topic in Political Science 789.2X, 789.3X, or 789.4X.)

Research courses

POLS 7910G Master's Thesis

30 hours plus conference; 3 credits
Research and writing of a master's thesis supervised by a faculty member. Students should see the graduate chair for guidelines, and must complete the thesis within two semesters.

Prerequisite: 21 credits and department approval.

POLS 7930X Research Tutorial

Hours to be arranged; 1 credit
Practical guidance for students writing Master's Theses in Political Science and International Affairs. Brief introduction to quantitative and qualitative methods employed in these fields. Overview of the process of writing a thesis, including formulating a research question, deciding on a method to collect and analyze information, and developing a credible argument based on logic and evidence. Assistance with goal setting and setting up peer writing groups.

Prerequisite or corequisite: Approval of the graduate deputy and completion of all required course work except the thesis, comprehensive or foreign language examination.

POLS 7940X Independent Study

Hours to be arranged; 3 credits
Study of a selected topic in political science developed by a group of 3 – 6 students and a faculty advisor, with a set of readings, written assignments, and regular meetings.

Prerequisite: at least 21 credits completed and submission of a course syllabus and permission of the deputy chairperson.

POLS 7950G International Affairs Internships

Supervised internship, 1 day per week for one semester; 3 Credits
Assignment to an internship in an international affairs governmental or non-governmental organization. Under joint supervision by a faculty member and a supervisor at the organization who writes a letter describing the internship at the beginning of the semester and an assessment of work at the end. Students will also write a policy paper analyzing the principal issue on which their internships focus.

The following inactive course(s) will only be offered if there is sufficient demand:

POLS 7420X Law and the Behavioral Sciences

POLS 7715X Political Systems in Developing Areas: Regional Analysis: North Africa

Psychology

Department office: 5401 James Hall
Phone: 718.951.5601

Full-time Faculty

Distinguished Professor: Sclafani

Professors: Abramov, Brauner, Delamater, Erdelyi, Ghirlanda, Hainline, Hardin, Hass, Kozbelt, Kuhlman, Osman, Pipe, Rabin, Snadowsky, Walder

Associate Professors: Chanowitz, Grasso, Kacinik, Kurylo, McDonough, Reigada, Robles, Weston

Assistant Professors: Carmichael, Chapman, Chua, Crump, Drake, Esber, Gao, Krishnan, Niwa, Shane

Instructor: Feitosa

Lecturers: Chalmers, Miles

M.A. degree program in experimental psychology
HEGIS code 2002; SED program code 90064

This program allows students to concentrate in the broad areas of cognition, learning, and perception as well as physiological, developmental, and social psychology. Focus is on preparation for a career in basic or applied research in a variety of settings. This program is also useful for those who wish to enroll in a doctoral program in psychology.

Matriculation requirements

Applicants should offer: (a) an overall GPA of 3.00 or better, (b) a minimum of 12 credits in psychology, and (c) courses both in statistics and in research methods, with a grade of B or better in both courses. General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Either 36 credits or 30 credits and a thesis, for which one opts by registering for Psychology 7781G, a three-credit course. The three required courses include Psychology 7703G, 7705G and 7706G. The remainder of each student's program consists of elective courses. Courses offered toward the degree must be 7000-level courses or higher. The comprehensive examination is a requirement of the program and students are eligible to take it when they have registered for their 24th credit.

M.A. degree program in industrial and organizational psychology - human relations
HEGIS code 2008; SED program code 90065

This program prepares the student for entry-level executive positions as generalists in the areas of personnel and human resources in organizations or for comparable-level positions in consulting firms that offer their services in these areas. It shares a common core of five courses with other concentrations in industrial and organizational psychology, but places additional emphasis on theory and practice at the group level of organizational activity.

Matriculation requirements

Matriculation requirements
Applicants should offer: (a) an overall GPA of 3.00 or better, (b) a minimum of 12 credits in psychology, and (c) courses both in statistics and in research methods, with a grade of B or better in both courses.

Degree requirements

Either 36 credits or 30 credits and a thesis, for which one opts by taking Psychology 7781G, a three-credit course. The eight required courses include either Psychology 7101G or 7231G; and 7110G, 7114G, 7105G, 7106G, 7210G, 7241G and one additional course from Psychology 7222G, 7223G, 7232G, 7244G, or 7242G. The remainder of each student's program consists of elective courses. Courses offered toward the degree must be 7000-level courses or higher, The comprehensive examination is a requirement of the program and students are eligible to take it when they have registered for their 24th credit.

M.A. degree program in industrial and organizational psychology - organizational behavior
HEGIS code 2008; SED program code 90066

This program prepares the student for entry-level executive positions as generalists in the areas of personnel and human resources in organizations

or for comparable-level positions in consulting firms that offer their services in these areas. It shares a common core of five courses with other concentrations in industrial and organizational psychology, but places additional emphasis on theory and practice at the organizational level of organizational activity.

Matriculation requirements

Matriculation requirements
Applicants should offer: (a) an overall GPA of 3.00 or better, (b) a minimum of 12 credits in psychology, and (c) courses both in statistics and in research methods, with a grade of B or better in both courses.

Degree requirements

Either 36 credits or 30 credits and a thesis, for which one opts by taking Psychology 7781G, a three-credit course. The eight required courses include Psychology 7101G or 7231G; and 7105G, 7106G, 7210G, 7221G, 7222G, 7241G, and 7242G. The remainder of each student's program consists of elective courses. Courses offered toward the degree must be 7000-level courses or higher, The comprehensive examination is a requirement of the program and students are eligible to take it when they have registered for their 24th credit.

M.A. degree program in mental health counseling
HEGIS code 2104.10; SED program code 30978

The 60-credit master's degree in Mental Health Counseling (MHC) prepares students to work as mental health counselors within medical, community, and private practice settings. Through rigorous academic coursework and clinical internship training, students learn to apply mental health approaches to contemporary practice, assessment, and treatment. The MHC Program provides in-depth exposure to three principal approaches to counseling: psychodynamic, experiential/humanistic, and cognitive-behavioral. In addition to the internship, students perform intake evaluations and psychotherapy at the College's counseling center. The Program focuses primarily on clinical work with adults and families. After 3,000 hours of supervised, post-degree experience students are eligible to take an exam for licensure permitting private and independent practice of counseling.

Matriculation requirements

Applicants must offer a minimum of 15 credits in undergraduate courses in psychology, with at least one course in each of the following areas: child or adolescent (developmental) psychology; general or introductory psychology; abnormal psychology, personality or psychopathology; and statistics or evidence of appropriate comparable background in related fields. Applicants must provide a personal statement, including discussion of related work, internship and/or personal experiences. Applicants must also submit letters of recommendation from individuals familiar with applicants' professional and academic experience. The program invites selected applicants to participate in an interview and to complete an on-site writing sample.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Sixty credits are required for the degree, a minimum of 48 of which must be taken in the Psychology Department. Students must pass a comprehensive examination after completing 48 credits.

Required courses are: Psychology 7410G, 7720G, 7755G, 7421G, 7431G, 7771G, 7441G, 7449G, 7442G, 7443G, 7110G, 7544G, 7591G, 7545G, 7106G, 7592G, 7245G; the remainder of each student's program must be approved by the program director. The program may be completed on either a full- or part-time basis.

Failure to earn a grade of B (3.00) or better in any one attempt at Psychology 7431G, 7449G, 7591G or 7592G may result in implementation of a student remediation plan, independent of the overall GPA, as deemed appropriate and according to procedures adopted by the department. Following remediation, failure to earn a grade of B or better in a subsequent attempt at Psychology 7431G, 7449G, 7591G, or 7592G may result in restrictions on registration in the Mental Health Counseling program. In addition, continued enrollment in all clinical practicum and internship courses is also contingent upon the student's adherence to and demonstration of standards of professional conduct and demeanor as deemed appropriate by the psychology department in concurrence with standards codified in the American Psychological Association and American Counseling Association and American Mental Health Counseling Association professional and ethical codes and guidelines and New York State regulations, as well as Brooklyn College standards for student conduct. These standards include, but are not limited to, confidentiality, client welfare, honesty, and academic integrity. Significant and/or repeated violations of these standards may result in dismissal from the Mental Health Counseling program when warranted and in conformity with policies and procedures adopted by the department and the College as appropriate.

New York State Mental Health Counseling Licensing

3,000 hours of supervised post-degree experience are required to be eligible to take the examination for licensure permitting private practice of mental health counseling. Information about New York State licensing for mental health counseling may be found at: http://www.op.nysed.gov/home.html.

CUNY Ph.D.

The City University of New York offers doctoral programs in which Brooklyn College faculty participate. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School."

Courses

Students may apply graduate or undergraduate courses toward fulfillment of a prerequisite unless otherwise stated.

PSYC 7101G Human Relations Training Seminar I

45 hours; 3 credits
A training-group approach. Participant orientation to group processes; assessment of such relevant interpersonal competences as leadership and assertiveness; observation and analysis of group process; group diagnosis; personal development; improvement of interpersonal skills; intervention analysis. (Not open to students who have completed Psychology 770G, 7771G [771G].)

Prerequisite of 7101G: permission of the deputy chairperson.

PSYC 7105G Quantitative Techniques in Industrial and Organizational Psychology

45 hours; 3 credits
This course will focus on the applications of statistics relevant to problems in industrial and organizational psychology. In addition to standard descriptive and inferential statistical procedures, the course will include a wide variety of correlational procedures, nonparametric procedures, chi-square, survey design procedures, and psychological scaling techniques.

Prerequisite: permission of the deputy chairperson.

PSYC 7106G Research and Program Evaluation Methods in Applied Psychology

45 hours; 3 credits
A critical examination of a wide variety of research and program evaluation designs and methods used in applied areas of psychology.

Prerequisite: Permission of the chairperson

PSYC 7109G Special Topics in Human Relations Training

45 hours; 3 credits
Topics vary from term to term. This course may be taken up to four times, so long as each involves a different Special Topic.

PSYC 7110G Theories of Group Process I

45 hours; 3 credits
The conceptual underpinnings and methodological perspectives of group process. The theories that have developed to support the activities that promote learning and change in individuals participating in a small group interactive experience. The relevance of theoretical models and cognitive structures in small groups.

Prerequisite: permission of the chairperson.

PSYC 7112G Intervention Theory and Practice I

45 hours; 3 credits
Analysis of the types of intervention available to the group leader and an evaluation of their effects on learning within the group. Intervention strategies are explored in the context of a variety of potential group situations. The development of individual intervention styles for increasing effectiveness is emphasized.

Prerequisite: Psychology 7101G [770.1G] and permission of the deputy chairperson.

PSYC 7114G Psychology of Small Groups I

45 hours; 3 credits
Development of small groups; theories of group development. Study of group processes; factors that enhance or inhibit group effectiveness and productivity; practice in group diagnostic skills; individual skills that increase group effectiveness.

Prerequisite: permission of the deputy chairperson.

PSYC 7115G Psychology of Small Groups II

45 hours; 3 credits
Continuation of Psychology 7114G [776G].

Prerequisite: Psychology 7114G [776G] and permission of the deputy chairperson.

PSYC 7209G Special Topics in Organizational Behavior

15-45 hours; 1-3 credits
Topics vary from term to term. This course may be taken up to four times, so long as each involves a different Special Topic.

PSYC 7210G Psychological Concepts and Methods: Issues In Organizational Psychology

45 hours; 3 credits
Introduction to major psychological concepts applicable in organizational theory. Includes scientific basis of psychology, experimental methods, psychodynamic personality theory, psychopathology, relevant topics in social psychology, motivation theory, group behavior theory.

PSYC 7221G Social Systems Sciences Theory: Assessing Organizational Structure, Design and Technology

45 hours; 3 credits
Review of macro-theory concerning structures and processes within major subsystems, organizations, and their environments, and the linkages among them. Assessment of macro-oriented organizational research.

Prerequisite or corequisite: Psychology 7210G [785.1G].

PSYC 7222G Macro-Organizational Applications: Organizational Diagnosis and Consultation

45 hours; 3 credits
An evaluation of methods of organizational diagnosis including psychodynamic and sociotechnical approaches. Special attention will be paid to the use of psychoanalytic theory in organizational diagnosis and consultation.

PSYC 7224G Systems Approaches to the Psychology of Work
45 hours; 3 credits
An examination of sociotechnical and psychoanalytic theory in the understanding of issues in the quality of working life. A review of recent research and practice.

PSYC 7228G Workplace Communication in Organizations
45 hours; 3 credits
Introduction to communication skills and strategies that managers need in today's workplace, including leadership communication, 360 degree communication, facilitating meetings, managing conflict, and identifying personality types to enhance communication effectiveness. This course will also include a review of techniques for giving and receiving feedback, negotiating, listening, and managing conflict.

PSYC 7231G Social Systems Sciences Theory: Group Relations Issues in Organizational Psychology
45 hours; 3 credits
Introduction to the major theoretical approaches to analysis of group and intergroup behavior in organizational settings. Primary focus on psychodynamic interpretation of group dynamics and behavior. Topics: primary task; task and sentient groups; basic assumption groups; role of anxiety, defense, and regression; nature of leadership and authority; developmental trends in groups.

Prerequisite or corequisite: Psychology 7210G [785.1G].

PSYC 7232G Group Relations Applications: Approaches to Training and Development
45 hours; 3 credits
Examination of specific cases of training and organization development with groups. Special emphasis on recent corporate interventions.

Prerequisite: Psychology 7210G [785.1G] and 7231G [787.10G] or permission of the instructor.

PSYC 7241G Social Systems Sciences Theory: The Individual in the Organization
45 hours; 3 credits
Introduction to the major theoretical approaches to analysis of individual behavior in organizational settings. Primary focus is on psychodynamic interpretation of individual behavior in a group and organizational context. Topics: person/role boundary; role of anxiety, defense, and regression; nature of leadership and authority; work attitudes (job satisfaction, job involvement, and organizational climate); motivational traits and environments; job performance.

Prerequisite or corequisite: Psychology 7210G [785.1G].

PSYC 7242G Human Resources Management Applications: The Individual/Organizational Boundary
45 hours; 3 credits
Current corporate examples of human resource systems and their impact on the individual. Topics: manpower planning; assessment centers; performance appraisal; wage and salary administration; benefit programs; incentives; and performance standards.

Prerequisite: Psychology 7210G [785.1G] and 7241G [788.10G] or permission of the instructor.

PSYC 7243G Labor Relations: Quality of Working Life Issues, Productivity, and Unions
45 hours; 3 credits
Assessment of the relationship between quality of working life, changes in productivity, and the negotiations process. Examination of contemporary labor-management experiments.

Prerequisite: Psychology 7210G [785.1G] and 7231G [787.10G] or permission of the instructor.

PSYC 7244G Leadership, Power, and Executive Stress
45 hours; 3 credits
Alternative theories of leadership, power, and executive stress in organizations.

Prerequisite: Psychology 7210G [785.1G] and 7241G [788.10G] or permission of the instructor.

PSYC 7245G Career Development
45 hours; 3 credits
Career development patterns in relation to maturation. Special attention to mid-career crisis, career change, obsolescence, outplacement, and retirement.

Prerequisite: Psychology 7210G [785.1G] and 7241G [788.10G] or permission of the instructor.

PSYC 7246G International Human Resource Management
45 hours; 3 credits
Human resource decisions and practices in an international context. Topics include: recruiting, selection, expatriation, repatriation, training, career management, performance management, compensation, and cross-cultural issues. This course is the same as Business 7250X [718X].

Prerequisite: an undergraduate course in human resource management or permission of the instructor.

PSYC 7247G Managing Diversity in the Global Economy
45 hours; 3 credits
The course will cover the following topics: diversity and individuals; defining diversity in a global context; theoretical perspectives on workplace diversity; diversity legislation in a global perspective; discrimination and fairness in employment; global demographic trends; diversity management; interpersonal relationships in a global context; intercultural communication process; intercultural negotiation process; politico-legal, economic and business environments in selected countries in a comparative perspective with those of the United States; and cultural values, communication patterns and negotiation styles in selected countries. This course is the same as Business 7255X [719X].

PSYC 7248G Gender and the Workplace
45 hours; 3 credits
Introduction to gender issues in the workplace. Includes a review of research in workplace equality between genders; cultural, societal and economic stereotypes of women; variances in communication methods; and organizational improvement.

PSYC 7410G Foundations of Mental Health Counseling
45 hours; 3 credits
Introduction to mental health assessment, counseling and psychotherapy; counseling and psychotherapy research; professional, ethical, and multicultural issues.

Prerequisite: permission of chairperson.

PSYC 7421G Assessment Techniques

45 hours; 3 credits
Clinical techniques in assessment.

Prerequisite: permission of the chairperson.

PSYC 7431G Assessment Practicum

45 hours; 3 credits
Clinical interviewing and psychological assessment practicum.

Prerequisite: permission of the chairperson. Pre- or co-requisite: Psychology 7421G [788.21G].

PSYC 7441G Social, Linguistic and Cultural Foundations of Counseling

45 hours, 3 credits
Examines the impact of social, linguistic and cultural factors have on case conceptualization and diagnosis, ethical practice, counselor emotional self-knowledge and counseling skills.

Prerequisite: permission of chairperson.
Pre- or co-requisites: Psychology 7410G [744.10G]; Psychology U7720G [720G]; Psychology U7755G [755G]; and Psychology 7421G [788.21G].

PSYC 7442G Psychodynamic Approaches to Counseling and Psychotherapy

45 hours; 3 credits
Introduction to psychodynamic approaches to mental health counseling and psychotherapy.

Prerequisite: permission of chairperson.
Pre- or corequisites: Psychology 7410G [744.10G]; Psychology U7720G [720G]; Psychology U7755G [755G]; and Psychology 7421G [788.21G].

PSYC 7443G Cognitive and Behavioral Approaches to Counseling and Psychotherapy

45 hours; 3 credits
Introduction to cognitive and behavioral approaches to counseling and psychotherapy.

Prerequisite: permission of chairperson.
Pre- or co-requisites: Psychology 7410G [744.10G]; Psychology U7720G [720G]; Psychology U7755G [755G]; and Psychology 7421G [788.21G].

PSYC 7449G Mental Health Counseling Practicum

45 hours; 3 credits
Introductory mental health counseling and psychotherapy practicum; basic counseling techniques.

Prerequisite: Psychology 7431G [788.31G] and permission of the chairperson.

PSYC 7544G Experiential Approaches to Counseling and Psychotherapy

45 hours; 3 credits
Introduction to experiential and humanistic approaches to counseling and psychotherapy.

Prerequisite: permission of chairperson.
Pre- or co-requisites: Psychology 7410G [744.10G]; Psychology U7720G [720G]; Psychology U7755G [755G]; and Psychology 7421G [788.21G].

PSYC 7545G Assessment, Counseling and Psychotherapy with Couples and Families

45 hours; 3 credits
Introduction to counseling and psychotherapy with couples and families; related research.

Prerequisite: permission of chairperson.
Pre- or co-requisites: Psychology 7410G [744.10G]; Psychology U7720G [720G]; Psychology U7755G [755G]; and Psychology 7421G [788.21G]; Psychology 7442G [754.20G].

PSYC 7546G Child and Adolescent Mental Health Counseling

45 hours; 3 credits
Introduction to treatment of children and adolescents in mental health counseling.

Prerequisites: permission of chairperson; completion of Psychology 7442G and 7443G.

PSYC 7571G Neuroscience, Trauma, Psychopharmacology, and Severe Mental Illness in Mental Health Counseling

45 hours; 3 credits
Introduction to treatment of severe mental disorders, trauma, psychopharmacology, and neuroscience in mental health counseling.

Prerequisite: Permission of chairperson; completion of Psychology 7442G [754.20G] (7442) and 754.30G [7443].

PSYC 7591G Mental Health Counseling Internship I

90 hours; 6 credits
A term (at least 300 hours, including at least 120 direct service counseling hours) of supervised internship in a mental health work setting similar to that in which the student expects to work as a counselor. Interns are expected to perform a full range of mental health counseling functions supervised by college and site personnel.

For Psychology 7591G and 7592G, interns must complete the two terms of internship at a single (the same) site for both courses or, if this is not possible, no fewer than 7 consecutive months and 450 hours, including 180 direct service counseling hours, at a single (either the original or a new) site in conformity with procedures adopted by the department.

Prerequisite: permission of chairperson; completion of Psychology 7442G [754.20G] and 7443G [754.30G].

PSYC 7592G Mental Health Counseling Internship II

90 hours; 6 credits
A term (at least 300 hours, including at least 120 direct service counseling hours) of supervised internship in a mental health work setting similar to that in which the student expects to work as a counselor. Interns are expected to perform a full range of mental health counseling functions supervised by college and site personnel.

For Psychology 7591G and 7592G, interns must complete the two terms of internship at a single (the same) site for both courses or, if this is not possible, no fewer than 7 consecutive months and 450 hours, including 180 direct service counseling hours, at a single (either the original or a new) site in conformity with procedures adopted by the department.

Prerequisite: permission of chairperson; completion of Psychology 7591G [795.10G].

PSYC U7700G History of Psychology

45 hours; 3 credits
Historical development of modern psychology.

PSYC U7703G Design of Psychological Research

45 hours; 3 credits
Consideration of the basic principles of research methodology as involved in the design of psychological research. Attention given to possible and likely sources of confounding in behavioral research and appropriate control procedures for dealing with them.

PSYC U7704G Instrumentation in Experimental Psychology

30 hours lecture, 30 hours laboratory; 3 credits
Lecture and laboratory illustrating the use of physical instruments in the generation of stimuli and measurement of responses. Techniques taught are general rather than specific to any particular area in psychology. No specialized background is assumed. (Not recommended for students with extensive experience in programming psychological equipment.)

PSYC U7705G Statistical Methods in Psychology I

30 hours lecture, 30 hours conference or laboratory; 3 credits
Advanced treatment of basic concepts of probability and inferential statistics. Statistical tests based on binomial, normal, chi-square, t, F distributions. (Not open to students who have completed Biology 781G.)

PSYC U7706G Statistical Methods in Psychology II

30 hours lecture, 30 hours conference or laboratory; 3 credits
Continuation of Psychology U7705G [705G]. Complex experimental designs; standard techniques of fitting curves to data; correlation; nonparametric and short-cut methods.

Prerequisite: Psychology U7705G [705G].

PSYC U7707G Multivariate Statistical Methods

45 hours; 3 credits
Detailed analysis of some major multivariate statistical procedures. Multiple regression; discriminant function analysis; multivariate analysis of variance; canonical correlation; factor analysis.

PSYC 7709G Special Topics in Experimental Psychology

15-45 hours; 1-3 credits
Topics vary from term to term. This course may be taken up to four times, so long as each involves a different Special Topic.

PSYC U7710G Advanced Physiological Psychology I

45 hours; 3 credits
Mechanisms of excitation; synaptic interaction; advanced topics in sensory psychophysiology; rhinencephalon and affective behavior.

Prerequisite: an undergraduate course in physiological psychology

PSYC U7711G Advanced Physiological Psychology II

45 hours; 3 credits
Comprehensive survey of brain-behavior relationships. Neurological, physiological, biochemical, endocrinological approaches to defining behavior processes.

Prerequisite: Psychology U7710G [710G].

PSYC U7716G Comparative Psychology

45 hours; 3 credits
Major topics in this field.

Prerequisite: an undergraduate course in comparative psychology.

PSYC U7718G Ethology

30 hours plus conference ; 3 credits
Species-specific behaviors and their physiological and endocrinological bases. Problems of phylogeny, evolution, ontogeny, instinct theory

Prerequisite: A graduate course either in comparative or physiological psychology

PSYC U7720G Developmental Psychology

45 hours; 3 credits
Survey of psychological development throughout childhood and adolescence.

PSYC U7730G Psychology of Learning

45 hours; 3 credits
Representative investigations and theories of learning.

PSYC U7735G Psychology of Perception

45 hours; 3 credits
Experimental foundations and theoretical approaches to problems in perception.

PSYC U7736G Sensory Psychology

45 hours; 3 credits
Detailed consideration of sensory processes and their mediating neural mechanisms.

PSYC U7737G Development of Cognition

30 hours plus conference; 3 credits
Cognition from the development point of view. Comparative studies of animals, children, and normal and abnormal adults examined in terms of cognitive function.

PSYC U7738G Cognitive Psychology

45 hours; 3 credits
Mental phenomena in terms of strategies of information processing. Nature and speed of different stages and types of perceptual and cognitive operations. Cognitive approach to storage and retrieval processes. Conditions that determine generation and evaluation of strategies. Facts and theories concerning attention, imagery, awareness.

PSYC U7740G Advanced Psychology of Personality

45 hours; 3 credits
Discussion and reports on topics in the field.

Prerequisite: a course in the psychology of personality.

PSYC U7741G Psychoanalytic Theory I

45 hours; 3 credits
Historical development of psychoanalytical theory is traced through a study of Freud's work. Major papers of each period of development are selected for detailed study and discussion.

PSYC U7745G Human Motivation

45 hours; 3 credits
Review of theory and research on such major current topics as arousal, curiosity, anxiety, achievement motivation, conflict, reinforcement, social motivation. Some consideration of methods of measuring human motivation.

Prerequisite: a graduate course in personality or learning.

PSYC U7746G Advanced Social Psychology

45 hours; 3 credits
Advanced topics in social psychology.

Prerequisite: a course in social psychology.

PSYC U7747G Experimental Social Psychology

45 hours; 3 credits
Critical examination of selected areas and relevant research methods in social psychology. Independent or group research on selected problems.

Prerequisite: Psychology U7705G [705G] and 7746G [U746G].

PSYC U7751G Computer Simulation of Psychological Process

45 hours; 3 credits
Discussion of attempts to simulate complex mental phenomena by computer. Value of making psychological theories explicit using computer models. Analysis of problems in the construction and evaluation of these models; examples from the fields of perception, problem solving, personality.

PSYC U7752G Language and Thought

45 hours; 3 credits
The nature, acquisition, behavioral effects of language. Language is studied in its phonological (phonetic), morphological (grammatical-rhetorical), semiological (semantic) aspects. Nature of semiotics (syntactics, semantics, and pragmatics), ambiguity, metaphor, bilingualism.

PSYC U7753X Foundations of Cognitive Science

45 hours; 3 credits
Bases for intelligent behavior in humans, animals, and machines. Human and machine intelligence are compared with respect to visual perception, speech perception, language comprehension, learning, and other adaptive mechanisms. This course is the same as Computer and Information Science 7400X [732.1X].

Prerequisite: a course in probability and statistics; and knowledge of such high-level programming languages as Pascal, PL/I, or LISP.

PSYC U7754G Natural-Language Processing

45 hours; 3 credits
The study of natural-language processing including linguistic theory, the formal theory of languages, and psycholinguistic investigations into human natural-language processing, both from the point of view of modeling human processing and of developing practical systems for machine processing of natural-language material. This course is the same as Computer and Information Science 7430X [733X].

Prerequisite: Computer and Information Science 6006X [622X] or a course in data structures.

PSYC U7755G Psychopathology

45 hours; 3 credits
Intensive study of case material in psychological literature of some theoretical and practical problems in the diagnosis, etiology, and dynamics of psychological disorders.

Prerequisite: Permission of the chairperson

PSYC U7763G Psychophysical Methods

45 hours; 3 credits
Systematic study of current psychophysical theory and methods including traditional approaches and more recent developments.

PSYC U7771G Ethical and Legal Issues for Psychologists

45 hours; 3 credits
Ethical and legal issues that arise in all aspects of the functioning of psychologists as scientists, academics, and practitioners. Students will be introduced to the ethical principles of the professional and relevant legal issues. Illustrative cases will be drawn from the American Psychological Association publication, Ethical Principles in Psychology, and from other courses. These will be discussed in order to facilitate the recognition and analysis of ethical problems that arise in a variety of settings, including animal as well as human research, clinical practice, and consultation.

PSYC 7781G Research in Psychology

45 hours; 3 credits
Research for master's thesis supervised by a faculty member. Credit is not earned until the thesis is accepted. Students register for this course only once.

PSYC 7791G Independent Reading

Minimum of 135 hours of independent work and conference; 3 credits
Reading, approved by a faculty adviser, in an area of psychology. One or more written reports or a final examination. (Psychology 7791G [791.1G] is not open to students who have completed Psychology 791G.)

Prerequisite: matriculation in the psychology program.

PSYC 7792G Independent Reading

Minimum of 135 hours of independent work and conference; 3 credits
Reading, approved by a faculty adviser, in an area of psychology. One or more written reports or a final examination. (Psychology 7791G [791.1G] is not open to students who have completed Psychology 791G.)

Prerequisite: matriculation in the psychology program.

PSYC 7795G Independent Psychological Research I

Minimum of 135 hours; 3 credits
Research project approved by a faculty member, in an area of psychology. One or more written reports or a final examination. (Psychology 7795G [799.1G] is not open to students who have completed Psychology 799G). This course may be taken up to two times, so long as each involves a different Research project.

PSYC 7796G Independent Psychological Research II

Minimum of 135 hours; 3 credits
Research project approved by a faculty member, in an area of

psychology. One or more written reports or a final examination. (Psychology 7795G [799.1G] is not open to students who have completed Psychology 799G). This course may be taken up to two times, so long as each involves a different Research project.

The following inactive course(s) will only be offered if there is sufficient demand:

PSYC 7102G Human Relations Training Seminar II
PSYC 7111G Theories of Group Process II
PSYC 7113G Intervention Theory and Practice II
PSYC 7211G Organizational Psychodynamics
PSYC 7223G Strategies of Intervention in Organizations
PSYC 7225G Planning and Control System Psychology
PSYC 7226G Psychology of High-Technology and MIS Implementation
PSYC 7227G Human Factors in Design and Engineering
PSYC 7233G Sociotechnical Systems Analysis: Autonomy in Groups
PSYC 7234G Action Research, Psychodynamic Theory, and Group Motivation
PSYC 7235G Small Work Group Consultation
PSYC U7733G Information and Decision Processes in Human Behavior
PSYC U7742G Psychoanalytic Theory II
PSYC 7780G Quantitative Methods in Psychology

Puerto Rican and Latino Studies

Department office: 1205 Boylan Hall
Phone: 718.951.5561

Full-time Faculty

Associate Professors: Aja, Perez, Perez y Gonzalez

The Department of Puerto Rican and Latin@* Studies, formerly the Department of Puerto Rican Studies, was established in 1970. Engendered by the civil rights movements and student activism, it is an academic unit committed to excellence in teaching and scholarship focusing on Latin@s*, Puerto Ricans, the Caribbean, and Latin America. The Department promotes transformative education encompassing active citizenship and leadership, providing students with the interdisciplinary knowledge and critical skills to live in a rapidly changing and globally interdependent 21st century.
* - @ denotes gender inclusivity

The department offers courses in conjunction with other College departments and programs, including Africana studies, American studies, anthropology and archaeology, archival studies (Brooklyn College Library), Caribbean studies, children and youth studies, economics, comparative literature (English), history, human resource management and diversity studies (sociology), interdisciplinary studies (communication), studies in religion, sociology, and women's and gender studies as well as the Conservatory of Music. Our department also participates in the graduate teaching fellows program of the Brooklyn College School of Education.

Students are encouraged to utilize the research resources of the Brooklyn College Center for Latino Studies as well as the CUNY Center for Puerto Rican Studies at Hunter College.

The following courses are offered as electives for students in other fields: Puerto Rican and Latino Studies 7415X, 7145X, and 7420X are among the required courses for students in the master of science in education degree program in elementary education who are specializing in bilingual teaching and planning to teach children whose native language is Spanish. Puerto Rican and Latino Studies 7345X or 7350X may be taken to fulfill requirements for the master of arts degree program in Spanish offered by the Modern Languages and Literatures Department.

Courses

PRLS 7140X Schools and Language Communities

30 hours plus conference; 3 credits
Focuses on selected language communities in the United States urban environment. Urban areas as multicultural/multilingual microcosms. Importance of language variety. Development of new curricular models designed to address the needs of students from diverse ethnolinguistic backgrounds. Theories, writings, and research studies in linguistics and sociolinguistics. Community-based influence on language expectation and attitudes. Intergenerational language shifts. Awareness of community and home language use as necessary toward the transformation of the school setting.

Prerequisite: at least 3 graduate credits in education, the social sciences, or the humanities or permission of the chairperson.

PRLS 7145X Bilingualism: Characteristics and Practices

30 hours plus conference; 3 credits
Study of the acquisition of two or more languages with special emphasis on Spanish-English bilingualism in the U.S. Philosophy and general practices related to bilingual programs in U.S. schools. International perspectives on bilingualism with selected case studies. Discussion of language policy and planning in developed and developing countries. Theories, writings, research studies in socio- and psycholinguistics. Application centered on the psycho-sociological background for language development in Puerto Rican and other Latino children. Independent research and professional development workshops.

Prerequisite: at least 3 graduate credits in education, the social sciences, or the humanities or permission of the chairperson.

PRLS 7415X Puerto Rican Society

30 hours plus conference; 3 credits
Colonial heritage and its evolution in Puerto Rican society. Contemporary social reality in Puerto Rico in terms of foreign and native influences. Issues of race, gender, class, and identity. Role of family, social interpretation of historical processes with regard to trends and attributes accepted, transmitted, developed in the society.

PRLS 7420X Puerto Rican and Latino/a Communities in Urban Areas

30 hours plus conference; 3 credits
Historical overview of the social, political, cultural, and organizational development of Puerto Rican communities set within the broader context of Latino/a history in the United States. Population and demographic distribution in urban areas. The significance of the New York Puerto Rican community. Analysis and evaluation of institutions created by Puerto Ricans and other Latino/as; impact on mainstream culture. Interdisciplinary and intergenerational perspectives. Independent community study project.

Prerequisite: At least 3 graduate credits in social sciences or humanities or permission of the chairperson.

PRLS 7450X Summer Seminar

45 hours lecture, 90 hours supervised fieldwork and independent study; 6 credits

In cooperation with institutions of higher education in Puerto Rico, the United States, the Caribbean, Latin America, Africa, or Europe, the department offers opportunities for study abroad. Field trips to places of cultural and historical significance. Lectures by scholars from Brooklyn College and the host country. Independent and/or group research. Students may take the course for credit twice, with the permission of the chairperson, but may not repeat countries. Consult department for locale of a specific offering. Travel and accommodation fees are required.

Prerequisite: permission of the chairperson in consultation with the instructor.

The following inactive course(s) will only be offered if there is sufficient demand:

PRLS 7345X Puerto Rican Narrative and Drama

PRLS 7350X Puerto Rican Poetry and Essay

School Psychology, Counseling & Leadership

Department office: 1107 James Hall
Phone: 718.951.5876

Full-time Faculty

Professors: Bloomfield, Bursztyn, Korn-Bursztyn, McCabe, Rubinson
Associate Professors: Dragowski, Forbes, Scharron-del Rio
Assistant Professors: Edwards, Elizalde-Utnick, Golubtchik

M.S. degree program in education: school psychologist
HEGIS code 0826.02; SED program code 01998

The school psychologist graduate program comprises an MSED and an Advanced Certificate in school psychology and consists of a 60-credit curriculum in theory, research, and evidence-based practice. The program is registered with the New York State Department of Education, and has full approval from the National Association of School Psychologists (NASP). Upon completion of the 33 credit MSED and then the 27 credit Advanced Certificate, graduates are eligible to apply for certification in school psychology with New York State and to apply for the Nationally Certified School Psychologist (NCSP) credential with the National Association of School Psychologists (NASP). Students collaborate with faculty, and build professional portfolios that include publications and presentations at local and national conferences.

Applicants are admitted to this program only in the fall; see application deadlines posted on the program website.

Matriculation requirements

Applicants must obtain and file a separate online program application in addition to the regular college application.

Applicants must offer at least 9 credits in experimental or research methods in psychology, statistics in psychology, and educational psychology or developmental psychology.

Applicants must present 3 credits in an education course in reading or literacy.

Applicants must have a minimum undergraduate scholastic index of 3.0 (B) and a minimum average of B in courses required for matriculation.

Applicants are interviewed and must submit appropriate letters of recommendation. Although not mandatory as a requirement for admission, applicants are encouraged to submit GRE scores (general and/or subject: psychology) as additional evidence to support the application.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the program head.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" in the Graduate Bulletin.

Degree requirements

Thirty-three credits are required for the degree.

Students must complete 33 credits selected from the following courses: SPCL 7931T, 7932T, 7903T, 7922T, 7911X, 7900X, 7923X, 7901X, 7910X, 7912X, 7913X, 7920X, 7921X, 7906X, 7907X, 7915X.

The program of study must be approved by the program coordinator.

Students must maintain a cumulative grade point average of at least 3.0 (B). A student who earns 6 credits below B- cannot be awarded an M.S. in Education in this program.

M.S. in Education degree program: educational leadership: school building leader; school district leader
HEGIS code 0828.00; 0827.00; SED program code 33411

This master's degree program prepares students for leadership careers in public and private pre-K-12 education. Students who successfully complete the three-semester, 36-credit program become simultaneously eligible for both the New York State School Building Leader (SBL) and School District Leader (SDL) certificates. The educational leadership program's curriculum is uniquely structured in both scope and sequence to combine small-group, cohort-based colloquiums with content in management and instructional leadership.

Matriculation Requirements

Applicants must obtain and file a program application form in the Graduate Admissions Office in addition to the regular college admission form.

Selection of applicants is based on a faculty committee review of the following requirements, all of which must be satisfied: a master's degree from an accredited institution; a permanent or professional certificate in the classroom teaching service or pupil personnel service or demonstration of the potential for instructional leadership based on prior experiences; evidence of superior scholarship; evidence of a high level of professional vision and effectiveness; and outstanding promise of professional leadership possessing the nine essential characteristics of effective leaders as a result of their prior experiences as attested by records, written references from supervisors, interviews, essay, and/or other sources of evidence the faculty committee may request. As required by Commissioner's Regulations, the nine characteristics of effective leaders are: (1) leaders know and understand what it means and what it takes to be a leader; (2) leaders have a vision for schools that they constantly share and promote; (3) leaders communicate clearly and effectively; (4) leaders collaborate and cooperate with others; (5) leaders persevere and take the long view; (6) leaders support, develop and nurture staff; (7) leaders hold themselves and others responsible and accountable; (8) leaders never stop learning and honing their skills; and (9) leaders have the courage to take informed risks.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements

A minimum of 36 credits is required for the Master's degree. The credits must be completed within three years after admission to the program. Students are required to complete a capstone fieldwork portfolio project under advisement of a faculty member.

Students must complete 36 credits in the following courses: SPCL 7751X, 7752X, 7753X, 7762X, 7763X, 7764X, 7754T, 7755T, 7756T, 7757T, 7758T, and 7759T.

M.S. in Education degree program: school counseling HEGIS code 0826.01; SED program code 01846

The school counseling program prepares prospective school counselors to work with ethnically and racially diverse populations in New York City public and private schools. Working from a holistic approach, candidates are encouraged to develop the necessary skills for engaging all members of the educational community-parents, administrators, teachers, students, and community organizations-in the process of making schools more responsive, equitable, and caring environments that foster life-long learning and growth. Internships and supervised field experiences are an integral part of our course of study.
The program includes two levels of study: the master of science in education provides graduates with New York State initial certification as school counselors; the advanced certificate in school counseling qualifies candidates with New York State professional certification. A 12-credit specialization in bilingual school counseling is also offered.
Graduates of our program are sought after by public and private schools where they counsel students from kindergarten through twelfth grade.

Matriculation requirements

Applicants must obtain and file the College admission form, including the supplemental School of Education admission form. Applicants must also submit letters of recommendation from individuals familiar with applicants' professional and academic experience. The program invites selected applicants to participate in a group interview and to complete an on-site writing sample.

In addition to the above requirements, applicants for the bilingual specialization in school counseling are interviewed in the language presented for competency.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs.

Degree requirements

Forty-eight credits are required for the degree. Fifty-seven credits are required for the degree with a specialization in bilingual school counseling.

Students must complete 48 credits in the following courses: SPCL 7801X, 7800X, 7806T, 7802T, 7804X, 7803T, 7810T, 7807T, 7808T, 7809T, 7922T, 7811T, 7813X, 7812T, 7814T, 7815T.

Students in the bilingual specialization take the following additional courses: SPCL 7823; SPCL 7914; CBSE 7350.

Students who have the school counseling M.S. degree from another university and wish to complete the bilingual specialization must take the following courses: SPCL 7922; SPCL 7823; SPCL 7914; CBSE 7350; SPCL 7815.

The sequence of the courses will be determined in consultation with the coordinator of the specialization in bilingual school counseling.

Additional requirements for students in the bilingual specialization:
a. all internships in the program must be conducted in a bilingual setting under the supervision of a bilingual school counselor (who possesses the bilingual extension).
b. passing score on the Bilingual Education Assessment (BEA), if language is available.

Full-time students take four courses each semester, and part-time students take two-to-three courses each semester.

After a student completes approximately 12 credits, the faculty members review the student's progress and potential and recommend continuation or withdrawal. This evaluation is based on criteria described in the "Program Statement of Expectations" made available to students when they enter the program.

Students will develop a professional portfolio.

Students must maintain a cumulative grade point average of at least 3.0 (B). A student who earns 6 credits below B- will not be awarded an M.S. in Education in this program.

Advanced certificate program in play therapy
HEGIS code 0826.02; SED program code 36488

The Program in Play Therapy provides a culturally competent, imagination-based, creative approach to supporting children's development and learning through environmental design, arts and play-based interventions. Play therapy is an applied approach that draws on the connection between emotional, creative and cognitive growth in childhood. It is applicable to a variety of environments with diverse children who present with typical development or with developmental, learning, linguistic, or behavioral concerns. It is the intervention of choice for children and their families who have experienced life disruptions including divorce, loss, dislocation and migration, illness, or trauma, including abuse, neglect, violence, war and natural disasters.

The Program provides graduate-level training for clinicians and graduate students in creative arts therapy, mental health counseling, school counseling, psychology, school psychology, social work, marriage and family therapy, psychoanalysis, medicine/ physician assistant, nursing or other appropriate professions.

Mental health clinicians who complete the Graduate Certificate in Play Therapy may apply for the RPT Registered Play Therapist (RPT) and Supervisor (RPT-S) credentials conferred by the Association for Play Therapy (APT). Brooklyn College's Play Therapy Project, of which the Advanced Certificate Program in Play Therapy is a key component, has been designated by APT as both an Approved Center of Play Therapy Education and an Approved Provider of Play Therapy Continuing Education.

The Advanced Certificate Program in Play Therapy presents a sequence of four courses for a total of 16 credits, structured sequentially to provide background in play therapy and to develop students' proficiency in the practice and supervision of play therapy with diverse populations. The applied emphasis of the program will strengthen students' clinical skills with children and families and enhance their professional opportunities in a variety of settings.

Matriculation requirements

Candidates should hold a professional license in a related profession or be an advanced student enrolled in a program that leads to certification in a mental health or health related profession.
General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements (16 credits)

Sixteen credits of coursework completed with a grade point average of B or better are required for the advanced certificate.
Students must complete all of the following courses:
SPCL 7946: Historical, Theoretical and Social Foundations of Play Therapy
SPCL 7947: Play Therapy Methods and Approaches
SPCL 7948: Play Therapy Applications for Special Populations
SPCL 7949: Advanced Seminar in Play Therapy Practice and Supervision

Advanced certificate program in school counseling
HEGIS code 0826.01; SED program code 01890

The school counseling program prepares prospective school counselors to work with ethnically and racially diverse populations in New York City public and private schools. Working from a holistic approach, candidates are encouraged to develop the necessary skills for engaging all members of the educational community-parents, administrators, teachers, students, and community organizations-in the process of making schools more responsive, equitable, and caring environments that foster life-long learning and growth. Internships and supervised field experiences are an integral part of our course of study.
The program includes two levels of study: the master of science in education provides graduates with New York State initial certification as school counselors; the advanced certificate in school counseling qualifies candidates with New York State professional certification. A 12-credit

specialization in bilingual school counseling is also offered.
Graduates of our program are sought after by public and private schools where they counsel students from kindergarten through twelfth grade.

Matriculation requirements

Applicants must obtain and file the College admission form, including the supplemental School of Education admission form. Applicants must also submit letters of recommendation from individuals familiar with applicants' professional and academic experience. The program invites selected applicants to participate in a group interview and to complete an on-site writing sample.

Advanced certificate requirements

Twelve credits beyond the master's degree are required for the advanced certificate.

Students must complete the following courses: SPCL 7816T, 7817T, 7818T, and 7819T.

A student whose master's degree represents fewer than 48 credits or whose master's degree lacks adequate internship or fieldwork preparation may be required to take SPCL 7807T and 7811T in order to be matriculated into the advanced certificate program.

Advanced certificate program: school psychologist
HEGIS code 0826.02; SED program code 79597

The school psychologist graduate program comprises an MSED and an Advanced Certificate in school psychology and consists of a 60-credit curriculum in theory, research, and evidence-based practice. The program is registered with the New York State Department of Education, and has full approval from the National Association of School Psychologists (NASP). Upon completion of the 33 credit MSED and then the 27 credit Advanced Certificate, graduates are eligible to apply for certification in school psychology with New York State and to apply for the Nationally Certified School Psychologist (NCSP) credential with the National Association of School Psychologists (NASP). Students collaborate with faculty, and build professional portfolios that include publications and presentations at local and national conferences.

Applicants are admitted to this program only in the fall; see application deadlines posted on the program website.

Applicants are admitted to this program only in the fall; see application deadlines posted on the program website.

Degree requirements (27 credits)

Matriculation requirements

Applicants must present an M.S. in Education degree for school psychologist (or the appropriate equivalent) as well as the requirements described above under the M.S. in Education degree for school psychologist.

Advanced certificate requirements

Twenty-seven credits (beyond the master's degree) are required for the advanced certificate. Students must complete 27 credits selected from the following courses: SPCL 7904T, 7902X, 7905X, 7931T, 7932T, 7923X, 7907X, 7933X, 7934X, 7912X, 7913X, 7920X, and 7921X.

During the first term, students must file a program of study approved by the program coordinator. Students must continuously maintain a cumulative grade point average of at least 3.0 (B). A student who earns 6 credits below B- will not be awarded an advanced certificate.

Completion of the advanced certificate program in addition to the M.S. Ed in school psychology fulfills requirements for provisional certification as school psychologist by the New York State Education Department.

Advanced certificate program: school psychologist, bilingual extension
HEGIS code 0826.02; SED program code 79597

Degree requirements (33 credits)

Applicants are admitted to this program only in the fall; see application deadlines posted on the program website .

Matriculation requirements

Applicants must present an M.S. in Education degree for school psychologist (or the appropriate equivalent) as well as meet the requirements under the M.S. in Education degree for school psychologist. The matriculation process for the bilingual school psychologist specialization will include demonstrated competence in the target language based on performance on the language proficiency test administered by the NYS Education Department.

Advanced certificate requirements

Thirty-three credits (beyond the master's degree) are required for the advanced certificate with a specialization in bilingual school psychology.

Students must complete 27 credits from the following courses: SPCL 7904T, 7905X, 7931T, 7932T, 7923X, 7907X, 7933X, 7934X, 7912X, 7913X, 7920X; and 7921X, plus the bilingual specialization courses SPCL 7823T and 7914X. Students who have not completed the school psychologist M.S. degree at Brooklyn College must also complete SPCL 7922T.

Students must pass the language proficiency test administered by the NYS Education Department in the language presented as their second language, if the language proficiency test is available. During the first term, students must file a program of study approved by the program coordinator. Students must maintain a cumulative grade point average of at least 3.00 (B). A student who earns 6 credits below B- will not be awarded an advanced certificate.

Completion of the advanced certificate program in addition to the M.S. Ed. In school psychology fulfills requirements for provisional certification as school psychologist by the New York State Education Department. Completion of the bilingual specialization fulfills course requirements for the bilingual extension to the certificate.

Courses

SPCL 7750T Internship Seminar in Educational Administration
30 hours seminar plus conference; 3 credits
Weekly seminar to analyze practical problems related to the student's concurrent internship.

Prerequisite: SPCL 7752X [771X], 7753X [772.3X], 7760X [775.1X], 7761X [775.2X]; matriculation in the educational administration and supervision program and permission of the program head.
Corequisite: SPCL 7769T [778.1T].

SPCL 7751X School-Community Relations

30 hours plus conference; 3 credits
Role of the educational leader in fostering effective and responsive relations between school and community. Practical problems are drawn from the field for analysis and study. This course satisfies the requirement for the human relations course that all New York City teachers must take and is approved as such by the New York City Board of Education.

Prerequisite: permission of the head of the educational leadership program.

SPCL 7752X Supervision of Instruction

30 hours plus conference; 3 credits
Theory and practice of supervision as an aspect of administration.

Prerequisite: permission of the head of the educational leadership program.

SPCL 7753X School Instruction and Curriculum Development, Innovation, and Evaluation
30 hours plus conference; 3 credits
Principles underlying present instructional and curriculum practice and ways of changing instruction and the curriculum. Design and evaluation of instructional and curriculum research.

Prerequisite: permission of the head of the educational leadership program.

SPCL 7754T Colloquium in Educational Leadership

15 hours lecture, 75 hours field work plus conference; 3 credits
Selected aspects of educational leadership through lectures, readings, case analyses, and directed on-site assignments. Students devote 75 hours to supervised field work during the term. The content of the colloquium varies from term to term, increasing each term in focus and depth of analysis.

Prerequisite: permission of the head of the educational leadership program.
Corequisite: SPCL 7754T [775.01T] must be taken with SPCL 7753X [772.3X].

SPCL 7755T Colloquium in Educational Leadership

15 hours lecture, 75 hours field work plus conference; 3 credits
Selected aspects of educational leadership through lectures, readings, case analyses, and directed on-site assignments. Students devote 75 hours to supervised field work during the term. The content of the colloquium varies from term to term, increasing each term in focus and depth of analysis.

Prerequisite: permission of the head of the educational leadership program.
Corequisite: SPCL 7755T [775.02T] must be taken with SPCL 7763X [775.4X].

SPCL 7756T Colloquium in Educational Leadership

15 hours lecture, 75 hours field work plus conference; 3 credits
Selected aspects of educational leadership through lectures, readings, case analyses, and directed on-site assignments. Students devote 75 hours to supervised field work during the term. The content of the colloquium varies from term to term, increasing each term in focus and depth of analysis.

Prerequisite: permission of the head of the educational leadership program.
Corequisite: SPCL 7756T [775.03T] must be taken with SPCL 7752X [771X].

SPCL 7757T Colloquium in Educational Leadership

15 hours lecture, 75 hours field work plus conference; 3 credits
Selected aspects of educational leadership through lectures, readings, case analyses, and directed on-site assignments. Students devote 75 hours to supervised field work during the term. The content of the colloquium varies from term to term, increasing each term in focus and depth of analysis.

Prerequisite: permission of the head of the educational leadership program.
Corequisite: SPCL 7757T [775.04T] must be taken with SPCL 7762X [775.3X].

SPCL 7758T Colloquium in Educational Leadership

15 hours lecture, 75 hours field work plus conference; 3 credits
Selected aspects of district-level educational leadership through lectures, readings, case analyses, and directed on-site assignments. Coursework focuses on constituencies in a district, instructional policy, fiscal and human resources, legal and equity issues, accountability, and external relationships. Students devote 75 hours to supervised field work during the term.

Prerequisite: permission of the head of the educational leadership program.
Corequisite: SPCL 7758T must be taken with SPCL 7764X.

SPCL 7759T Colloquium in Educational Leadership

15 hours lecture, 75 hours field work plus conference; 3 credits
Selected aspects of district-level educational leadership through lectures, readings,case analyses, and directed on-site assignments. Coursework focuses on constituencies in a district, instructional policy, fiscal and human resources, legal and equity issues, accountability, and external relationships. Students devote 75 hours to supervised field work during the term.

Prerequisite: permission of the head of the educational leadership program.
Corequisite: SPCL 7759T must be taken with SPCL 7751X.

SPCL 7760X Administration: Theory and Practice I

45 hours; 3 credits
Theories, concepts, and processes in administration. Recent changes and current practices.

Prerequisite: matriculation in the educational administration and supervision program and permission of the program head.

SPCL 7761X Administration: Theory and Practice II

45 hours; 3 credits
Theory and practice of the leadership role of administrators in school organizations. Nature of leadership and its implications for administrator behavior. Techniques for successful exercise of leadership with emphasis on urban schools. Practical problems from the field are studied and analyzed.

Prerequisite: SPCL 7760X [775.1X] and permission of the head of the educational administration and supervision program.

SPCL 7762X Personnel Functions in Educational Administration

30 hours plus conference; 3 credits
Personnel functions and their impact on the effectiveness of the organization in relation to goals.

Prerequisite: permission of the head of the educational administration program.

SPCL 7763X Management and Finance Functions in Educational Leadership

30 hours plus conference; 3 credits
Exercise of leadership in the management and finance functions of public school organizations.

Prerequisite: permission of the head of the educational leadership program.

SPCL 7764X Education Law and Ethics

30 hours plus conference ; 3 credits
School law and ethics as they affect the policies, organization, and administration of public and private schools.

Prerequisite: permission of the head of the educational leadership program.

SPCL 7769T Internship in Educational Administration and Supervision I

90 hours; 3 credits
Administrative-supervisory internship in an educational organization under the supervision of a practicing school administrator and members of the college faculty in educational administration and supervision. Application of theories and concepts to practical situations that confront the administrative and supervisory practitioner.

Prerequisite: SPCL 7752X [771X], 7753X [772.3X], 7760X [775.1X], 7761X [775.2X]; and permission of the head of the educational administration and supervision program.
Corequisite: SPCL 7750T [710T].

SPCL 7771X Collective Negotiations in Public Education

45 hours; 3 credits
Meaning and impact of collective negotiations on public education.

Prerequisite: matriculation in the educational administration and supervision program or permission of the program head.

SPCL 7800X Leadership and Group Dynamics: Theory and Practice

30 hours lecture, 30 hours laboratory plus conference; 3 credits
Social processes in groups and their impact on individual behavior. Lecture/discussion and membership in an experiential group designed to provide opportunities for learning about group dynamics through an examination of power, authority, leadership, intergroup and interpersonal processes. Application of learning to the practice of effective group leadership and membership in schools.

Prerequisite: SPCL 7801X [735.3X].

SPCL 7801X Principles and Practices of Guidance

45 hours; 3 credits
Basic understanding and perspective of guidance history, philosophy, services, forms of organization, and current issues as a foundation for subsequent training and professional practice.

SPCL 7802T Counseling Theories

30 hours plus conference; 3 credits
Critical and comprehensive investigation of counseling theories and practices for school counselors working with diverse children and adolescents in school settings. Consideration of issues and strategies important to work with English language learners and students with special needs.

Prerequisite: identified in degree requirements for the M.S. in Education program in School Counseling.

SPCL 7803T Individual Counseling Skills

30 hours lecture, 30 hours laboratory; 3 credits
Introductory course in counseling skills development designed to increase the qualities of self-awareness and mindfulness. Approaches to intervention. Exploration of specific methods and procedures of individual appraisal. Lecture, demonstration, written assignments, videotape analysis and group practice.

Prerequisite: SPCL 7804X [701.01X]

SPCL 7804X Human Development

30 hours plus conference; 3 credits
Factors relevant to human growth and development. Theories of child, adolescent, and family development and transitions across the life-span in diverse urban school settings. Consideration of social, cultural, and linguistic contexts. Study of gender identity and sexual orientation. Focus on application of life-span developmental theory in school counseling practice for facilitating optimal development for all students.

Attention to issues of students with special needs. Required projects in school or community settings.

Prerequisite: SPCL 7802X [724.09X]

SPCL 7806T Schools and Communities

30 hours plus conference; 3 credits
Interdisciplinary study of relations between schools and communities and their impact on the quality of education in schools. Theories of community and institutional organization, power relationships, and power structures. The role of the counselor in developing relations between schools and communities. Required projects in school or community settings.

Prerequisite: SPCL 7800X [724.10X].

SPCL 7807T Practicum

30 hours lecture/supervision, 100 hours practicum; 3 credits
Planned program of supervised fieldwork in a setting similar to that in which the student expects to work. Application of individual and group theory to individuals and groups in schools. Students co-lead groups and conduct individual counseling sessions in school setting; group seminar/supervision, case conference, and triadic supervision. One hundred hours of practicum at an approved school: 40 hours of direct counseling services and 60 hours of indirect / collateral services.

Prerequisite: SPCL 7803T and 7800X.

SPCL 7808T Fundamentals of Qualitative and Quantitative Research

30 hours plus conference; 3 credits
Descriptive, experimental, case-study, action research and other models of research relevant to counseling and education. Collection and use of data to identify and address issues affecting the quality of education. Planning and implementing a research project in school or community settings.

Prerequisite: SPCL 7807T [724.07T].

SPCL 7809T Use of Educational, Vocational, and Community Information

45 hours; 3 credits
Classification analysis and description of occupations. Trends in vocational education. Occupational trends. Collection and dissemination of information in guidance practices.

Prerequisite: SPCL 7807T [724.07T].

SPCL 7810T Educational and Psychological Assessment

30 hours plus conference; 3 credits
Critical and historical perspectives on the nature and uses of assessment in schools; portfolios, standardized tests, inventories, case studies, and observations; sociometrics relevant to counseling and appraisal in schools. Consideration of strategies for assessing students with special needs, with attention to the cultural, linguistic, and societal factors involved in their identification, placement, and academic and behavioral performance. Required projects in school or community settings.

Prerequisite: identified in degree requirements in the M.S. in Education program in School Counseling.

SPCL 7811T Internship I

300 hours; 3 credits
A term of supervised internship in a work setting similar to that in which the student expects to work as a counselor. This course is the first of two required supervised internships in urban school counseling. Counseling interns are required to provide 120 hours of direct counseling/consultation service with clients and 180 hours of indirect collateral service (including staff meetings and on-site supervision) at an approved internship site. Students also participate in weekly group supervision devoted to evaluation of counseling, consultation, advocacy, and leadership drawing on self-report, journals, audio or videotapes of counseling sessions, and selected advanced counseling topics.

Prerequisite: SPCL 7922T [715.1T].

SPCL 7812T Working with Families in Schools

45 hours; 3 credits
Discussion of changing nature of families, family systems dynamics and development, and culturally and economically diverse families in urban school context. Working in schools with families, parents, and guardians in the educational and emotional lives of children through family assessments, brief short-term family counseling, parenting workshops, and educational workshops. Consideration of issues and dynamics for the family and child with special needs. Experiential component.

Prerequisite: identified in degree requirements in the M.S. in Education Program in School Counseling.

SPCL 7813X Organization and Administration of Guidance Services

45 hours; 3 credits
Basic considerations in the planning, organization, and operation of guidance programs as a whole, including such phases of service as testing and counseling. Typical forms of effective organization and operation. Discussion of problems in initiating and conducting programs.

Prerequisite: SPCL 7801X [735.3X].

SPCL 7814T Contemplative Urban School Counseling

45 hours; 3 credits
Contemplative practices as applied to counseling in urban schools. Promotion of urban schools as caring, healing, growth-enhancing communities. Discussion of recent research and practices in counselor self-awareness, mindful classrooms and schools, counseling and healing, engaged service, and conflict resolution. Consideration of gender, culture, religion, and class with respect to urban school issues.

Prerequisite: identified in degree requirements in the M.S. in Education program in School Counseling.

SPCL 7815T Internship II

300 hours; 3 credits
Continuation of SPCL 7811T [701.03T]. This course is the second of two required supervised internships in urban school counseling. Counseling interns are required to provide 120 hours of direct counseling/consultation service with clients and 180 hours of indirect collateral service (including staff meetings and on-site supervision) at an approved internship site. Students also participate in weekly group supervision devoted to evaluation of counseling, consultation, advocacy, and leadership drawing on self-report, journals, audiotapes of counseling sessions, and selected advanced counseling topics.

Prerequisite: SPCL 7814T [756.12T].

SPCL 7816T Counseling in Community Settings

30 hours, plus conference; 3 credits
Critical and historical perspectives on community counseling. General principles of community intervention, consultation, education, and outreach. Current methods of practice, including assessment and

diagnosis in social context. Role of school counselor in making referrals. Survey of community agencies and organizations. Required projects in school or community setting.

Prerequisite: identified in requirements in the Advanced Certificate program in School Counseling.

SPCL 7817T Advanced Internship I

150 hours; 3 credits
First of two supervised internships in community counseling. Direct counseling and advocacy with clients and indirect collateral service, including consulting, coordinating, and collaboration, with on-site supervision at an approved internship site. Weekly group supervision devoted to evaluation of students' practice in community settings, using self-report, journals, videotaped counseling sessions, observations, and selected advanced topics related to community counseling. Special section of course for students pursuing specialization in bilingual counseling.

Prerequisite: identified in requirements in the Advanced Certificate program in School Counseling.

SPCL 7818T Urban Trauma: Counseling Issues and Strategies

45 hours; 3 credits
General nature of trauma and post-traumatic stress disorder. Topics include risk and resiliency factors for youth and community, trauma and schools, crisis intervention, diagnosis, and post-trauma individual and group counseling.

Prerequisite: identified in requirements in the Advanced Certificate program in School Counseling.

SPCL 7819T Advanced Internship II

150 hours; 3 credits
Second of two supervised internships in community counseling. Direct counseling and advocacy with clients and indirect collateral service, including consulting, coordinating, and collaboration, with on-site supervision at an approved internship site. Weekly group supervision devoted to evaluation of students' practice in community settings, using self-report, journals, videotaped counseling sessions, observations, and selected advanced topics related to community counseling.

Prerequisite: identified in requirements in the Advanced Certificate program in School Counseling.

SPCL 7823T Seminar in Bilingual School Counseling

45 hours; 3 credits
Examination of issues and techniques relevant to providing counseling services to culturally and linguistically diverse (CLD) individuals. Content and activities of the course are organized to meet the needs of practicing guidance workers. Theory and experiential activities.

Prerequisite: identified in degree requirements in the M.S. in Education program in School Counseling

SPCL 7824T Seminar in Guidance Practice I, II

45 hours each term; 3 credits each term
An independent project course on problems in selected areas of guidance practice. Content and activities of the course are organized to meet the needs of practicing guidance workers. Independent and group study.

Prerequisite: matriculation in the guidance and counseling program and permission of the program head.

SPCL 7825T Seminar in Guidance Practice I, II

45 hours each term; 3 credits each term
An independent project course on problems in selected areas of guidance practice. Content and activities of the course are organized to meet the needs of practicing guidance workers. Independent and group study.

Prerequisite: matriculation in the guidance and counseling program and permission of the program head.

SPCL 7826T Independent Study in Guidance

Hours to be arranged; 3 credits each term
Independent study and research supervised by a faculty member. Written report.

Prerequisite: matriculation in the guidance and counseling program and permission of the program head.

SPCL 7827T Independent Study in Guidance

Hours to be arranged; 3 credits each term
Independent study and research supervised by a faculty member. Written report.

Prerequisite: matriculation in the guidance and counseling program and permission of the program head.

SPCL 7900X Theories of Human Development

30 hours plus conference; 3 credits
Contemporary theories of child development. Biological, behavioral, social and cultural approaches to the study of human development in multicultural contexts. Dimensions of human identity including race, ethnicity, culture, sex and gender.

Prerequisite: matriculation in the school psychologist program, permission of the program head.

SPCL 7901X Developmental Psychopathology

30 hours plus conference; 3 credits
Patterns of adjustment and maladjustment to school environments including: behavior disorders, attention deficits, truancy and addictions. Focus on observation, functional behavioral assessment and contextually relevant intervention approaches. Intensive study of illustrative and case material.

Prerequisite: matriculation in the school psychologist program and permission of the program head.

SPCL 7902X Crisis Intervention and Prevention Research in Schools

45 hours plus conference, 3 credits
Review of approaches to foster healthy and safe school environments for all in diverse school communities. Mental health focused crisis prevention, preparedness, response, and recovery. Review and critique of research assumptions, methods, design, and ethics in crisis prevention and intervention. Qualitative and/or participatory action research proposal for implementation in SPCL 7905. The proposal will be implemented in SPCL 7905.

Prerequisite: matriculation in the Advanced Certificate in School Psychology and permission of Program Coordinator
Corequisite: SPCL 7933

SPCL 7903T Problems and Practices in School Psychology

30 hours plus conference; 3 credits
History and foundations of school psychology. Role of the school

psychologist as related to curriculum, school administration, evaluation, and other issues. Educational policies and their effects on urban, multicultural schools. Ethical, professional and legal standards.

Prerequisite: matriculation in the school psychologist program, and permission of the program head.

SPCL 7904T Research Seminar in School Psychology

45 hours plus conference; 3 credits
Introduction to research design in school psychology. Quantitative and qualitative methods are studied by surveying representative articles in the literature. Critical perspectives on social science research. Students formulate and discuss a research design.

Prerequisite: matriculation in the school psychologist program, permission of the program head/coordinator.

SPCL 7905X Applied Theory and Research Seminar in School Psychology

45 hours plus conference; 3 credits
Continuation of the study of educational research and methodology and completion of an independent research project related to an area of school psychology.

Prerequisites: SPCL 7904T [703T], matriculation in the school psychologist program, and permission of the program head.

SPCL 7906X Instructional Interventions in Schools

45 hours plus conference; 3 credits
Policies regulating curriculum development and practices. School based curriculum evaluation and models of curriculum based assessment applied to instructional accommodations and assistive technologies. Differentiation of instruction and other curriculum modifications for all students including students with special needs and English Language Learners. Learning strategies and approaches to literacy instruction.

Prerequisite: matriculation in the school psychologist program and SPCL 7900X [721.1X] and permission of the program head.

SPCL 7907X Neuropsychology of Learning

30 hours plus conference; 3 credits
This course is designed to review the neurophysiological and neuropsychological bases of behavior as it pertains to developmental disorders. Students will identify functional neuroanatomy, neuroimaging techniques, medications, and various neurological and neuropsychological disorders. Students will apply findings and research to contemporary problems and issues facing school psychologists.

Prerequisite: matriculation in the school psychologist program, SPCL 7900X, and permission of the program head/coordinator.

SPCL 7910X Cognitive and Academic Assessment

45 hours plus 30 hours conference; 4 credits
Assessment of cognitive abilities, aptitude, and achievement. Administration, scoring, and interpretation of standardized and clinical procedures through lecture and laboratory work. Integration of data from assessment with other sources to produce effective educational recommendations. Critical perspectives on psycho-educational assessment including limitations of contemporary instruments, potential adverse effects of assessment policies, and alternative procedures.

Prerequisite: matriculation in the school psychologist program, and permission of the program head/coordinator.

SPCL 7911X Cognitive and Academic Assessment II

30 hours plus 30 hours conference; 3 credits
Theories and research findings regarding children who have difficulty learning in school. Diagnosis, etiology and interventions for children with learning difficulties. Evaluation and interpretation of assessment and contextual factors in learning difficulties.

Prerequisite: matriculation in the school psychologist program, SPCL 7910X [726.6X] with a grade of B- or better, and permission of the program head.

SPCL 7912X Social and Adaptive Behavioral Assessment

45 hours plus 30 hours conference; 4 credits
Administration, scoring, and interpretation of measures of adaptive behavior and personality. Representative projective techniques, objective personality and behavior assessments, and adaptive behavior measures are introduced and administered. Research findings and critiques pertaining to the most commonly used personality and adaptive behavioral assessments are discussed throughout. Field-based assignments are required.

Prerequisite: matriculation in the school psychologist program, SPCL 7910X with a grade of B- or better, 7911X with a grade of B- or better, and permission of the program head/coordinator

SPCL 7913X Integration of Assessment and Report Writing

30 hours lecture plus 30 hours conference; 3 credits
Interpretation and integration of findings from evaluations, including cognitive, achievement (both standardized and curriculum-based), personality and behavioral assessment. Report writing and formulation of IEP goals are stressed. Field-based assignments are required.

Prerequisite: matriculation in the school psychologist program, SPCL 7910X with a grade of B- or better, SPCL 7911X with a grade of B- or better, SPCL 7912X with a grade of B- or better and permission of the program head/coordinator.

SPCL 7914X Psychological Assessment of Diverse Students

45 hours; 3 credits
Psychoeducational assessment of English language learners and culturally diverse children and adolescents. Approaches to nonbiased assessment, including testing in the child's native language, bilingual testing, adaptation of standardized instruments and techniques, and dynamic assessment. Students will administer psychoeducational assessment batteries to language-minority individuals, interpret test data, and write reports. Field-based assignments.

Prerequisite: matriculation in the school psychologist program and SPCL 7910X, 7911X and 7912X, and permission of the program head/coordinator.

SPCL 7915X Behavioral Assessment and Intervention

30 hours plus conference; 3 credits
This course is designed to provide students with knowledge and understanding of behavioral assessment and intervention strategies. Students will learn and review the fundamentals of human learning, according to behavioral and learning theorists. Students will then apply principles of learning to the classroom, for assessment, intervention, and evaluation purposes. This course prepares students to use collaborative problem solving in the application of behavioral techniques.

Prerequisite: matriculation in the school psychologist program and permission of the program head.

SPCL 7920X Theory and Practice of Prevention, Crisis Intervention, and Mental Health Counseling in Schools

45 hours; 3 credits
Approaches to the practice of prevention, crisis intervention, and

mental health counseling in schools. Counseling functions and other mental health practices of the school psychologist. Field-based experiences are required.

Prerequisite: matriculation in and completion of 15 credits in the school psychologist program and permission of the program head.
Corequisite: SPCL 7931T [704.1T].

SPCL 7921X Counseling Children and Families

45 hours; 3 credits
This course prepares school psychology candidates to counsel children and families within a school context. Topics to be addressed include: approaches to counseling and intervention modalities, play therapy, group counseling, and counseling children with special needs; family systems approaches, school-parent interactions, cultural and community factors. Analysis and exploration of diverse family structures. Teacher-parent/s, parent/s-child, sibling-child relations, collaboration, and community resources for the child. Emphasis on urban and cultural perspectives, development of school- parent-community partnerships.

Prerequisite: SPCL 7920X [733X], matriculation in and completion of 15 credits in the school psychologist program, and permission of the program head. Corequisite: SPCL 7932T [704.2T].

SPCL 7922T Multicultural Counseling and Consultation in Schools

45 hours; 3 credits
Clinical skills necessary for pupil personnel services providers to work effectively with multilingual and culturally diverse populations.This experience-based course will develop awareness of cultural, linguistic, and ethnic factors that influence and shape behavior and development. Personal history, literature, and films will be analyzed in the contexts of acculturation and identity. Current research and theoretical and applied knowledge in this field will be reviewed. Students will integrate theoretical and applied knowledge in written assignments and presentations.

Prerequisite: Permission of the program head/coordinator

SPCL 7923X Consultation in the Schools

30 hours plus 30 hours conference; 3 credits
School-based consultation, with emphasis on a variety of models; acquisition of clinical skills; theoretical bases; exploration of skills and attitudes necessary for working with culturally diverse groups; application of consulting knowledge and skills in both laboratory and field situations; exploration of recent developments, trends, and research in consultation.

Prerequisite: matriculation in the school psychologist program, SPCL 7900X and permission of the program head/coordinator.
Corequisite: SPCL 7932T.

SPCL 7930X Practicum in School Psychology

60 hours; 4 credits
Supervised experience in the educational and clinical functions of the school psychologist as a mental health consultant to school personnel and families. Students study urban, multicultural schools and deal with a wide range of typical functions of the school psychologist. Policies and procedures regulating professional practices in schools.

Prerequisite: matriculation in the school psychologist program and SPCL 7903T [715T], and permission of the program head.

SPCL 7931T Practicum in School Psychology I

15 hours plus 100 hours supervised fieldwork; 2 credits
Supervised experience in the role and functions of the school psychologist with culturally diverse students, groups, and colleagues.

Prerequisite: matriculation in the school psychologist program, SPCL 7910X with a grade of B- or better, 7911X with a grade of B- or better, and permission of the program head/coordinator. Corequisite: SPCL 7920X.

SPCL 7932T Practicum in School Psychology II

15 hours plus 100 hours supervised fieldwork; 2 credits
Supervised experience in the role and functions of the school psychologist with culturally diverse children, groups, colleagues, and families in educational and/or clinical settings.

Prerequisite: matriculation in the school psychologist program, SPCL 7931T [704.1T], 7910X [726.6X], 7911X [721X], and permission of the program head.
Corequisite: SPCL 7921X [733.2X], SPCL 7923X [721.3X].

SPCL 7933X Internship in School Psychology I

600 hours fieldwork, plus 15 hours supervision on campus; 3 credits
Supervised experience in the clinical and educational functions of the school psychologist in diverse settings. Field experience provides context for supervised integration of previously acquired competencies and professional approaches to the functions of school psychology.

Prerequisite: matriculation in the school psychologist program, SPCL 7932 with a grade of B or better, and permission of the program head/coordinator.

SPCL 7934X Internship in School Psychology II

600 hours supervised fieldwork plus 15 hours supervision on campus; 3 credits
Supervised experience in the clinical functions of the school psychologist in diverse settings. Field experience provides context for supervised integration of previously acquired competencies and professional approaches to the functions of school psychology.

Prerequisite: matriculation in the school psychologist program, SPCL 7932 with a grade of B or better, SPCL 7933X with a grade of B or better, and permission of the program head/coordinator.

SPCL 7940X Personality Theory and Research

30 hours plus conference; 3 credits
Contributions to the understanding of child development and personality including trait theory, psychoanalysis, behaviorism, and humanism. Other contemporary theoretical models and contemporary developments.

Prerequisite: matriculation in the school psychologist program, SPCL 7900X [721.1X] and permission of the program head.

SPCL 7941X Literacy and Learning Difficulties

45 hours; 3 credits
Theories and research on factors that facilitate and inhibit learning and literacy development. Diagnosis, etiology, and remediation of these difficulties. Principles of consultation with parents, teachers, and other professionals.

Prerequisite: Permission of the program head/coordinator.

SPCL 7942X Group Process and School Culture

45 hours plus 30 hours conference; 4 credits
Group processes in the school and classroom affecting the learning, behavior, and mental health of pupils. Role of the school psychologist in analyzing behavior in school context and effecting change. Working with groups in crisis intervention. Confronting and reducing bias in

schools and classrooms. Experience in participating in and studying a group.

Prerequisite: matriculation in the school psychologist program, SPCL 7900X [721.1X], 7940X [721.2X], 7920X [733X], and 7943X [726.4X], and permission of the program head.
Corequisite: SPCL 7932T [704.2T].

SPCL 7943X Problems of Child and Adolescent Development I
30 hours plus independent work, and conference; 3 credits
Typical and atypical development of children and adolescents in urban and multicultural contexts, including physiological, neurological, orthopedic, health and sensory challenges, traumatic brain injury and cognitive impairments. Intensive study of illustrative and case material. Biological, psychological, sociological, cultural, and linguistic influences. Assistive technologies and other interventions.

Prerequisite: matriculation in the school psychologist program and permission of the program head.

SPCL 7945X Independent Study in School Psychology
Hours to be arranged; 3 credits
Independent study and research in a selected area of school psychology supervised by a faculty member. Research paper.

Prerequisite: matriculation in the School Psychologist Program and permission of the program head.

School psychology

SPCL 7946X Historical, Theoretical and Social Foundations of Play Therapy
45 hours, one hour conference; 4 credits
Overview and critical analysis of history of play therapy. Case-based approach to study of multiple theoretical and applied approaches with a diverse child population. Explore social and cultural contexts of play therapy; role of the play therapist; therapeutic relationship. Emphasis on working with families. Development of a diversity-sensitive approach to play therapy practice with children and families in school and community settings.

SPCL 7947X Play Therapy Methods and Approaches
45 hours lecture, one hour conference; 4 credits
Focus on developing applied skills for conducting and evaluating play therapy with diverse populations of typically developing children, and children with autism spectrum disorders in school and community settings. Overview of play therapy interventions with common presenting problems including anxiety, aggression, oppositional behavior. Working with diverse families in play therapy.

SPCL 7948X Play Therapy Applications for Special Populations
45 hours lecture; 1 hour conference; 4 credits
Study of play therapy interventions with special populations, including diverse children who have experienced loss, trauma, abuse, or neglect. Development of applied skills for conducting and evaluating play therapy interventions in school and community settings. Emphasis on development of clinical sensitivity to working with diverse children who present with a wide variety of psychological needs, and their families.

SPCL 7949X Advanced Seminar in Play Therapy Practice and Supervision
45 hours lecture, 1 credit conference; 4 credits
Advanced seminar in play therapy practice with diverse populations; group supervision of play therapy practice. Study of advanced play therapy skills. Review of diagnostic play assessment and child forensic interviewing. Principles of clinical supervision of play therapy; role of play therapy supervisor; impact of vicarious trauma on play therapist. Students are expected to draw on their play-based experiences in the field (work or volunteer) in school or community settings.

The following inactive course(s) will only be offered if there is sufficient demand:

SPCL 7766T Practicum in Supervision of Student Teachers

SPCL 7767X The Public Administration of Education

Secondary Education

Department office: 2606 James Hall
Phone: 718.951.5325

Full-time Faculty

Professors: Florence, Miele, Shanley, Taubman
Associate Professors: Adams, Alexakos, Meagher, Murrow, Parmar, Rubel, Zolkower
Assistant Professor: Jeffery
Lecturer: Herrera

The Department of Secondary Education at Brooklyn College offers programs in secondary education and special subjects leading either to the master of arts or master of science in education degree. The 30-plus credit programs are registered with the New York State Education Department and lead to initial and/or professional teacher certification in the following subjects: biology (grades 7-12); chemistry (grades 7-12); English (grades 7-12); general science teacher (5-9); mathematics (grades 5-9); mathematics (grades 7-12); music (all grades); physics (7-12); social studies (7-12); modern languages (French, Spanish) (grades 7-12). The Secondary Education department also offers two master of arts in teaching (M.A.T.) programs: the M.A.T. in Adolescence Science Education (grades 7-12), with specialization in biology, chemistry, earth science or physics teacher, and the M.A.T. in Earth Science Teacher (grades 7-12).

The Department of Secondary Education is committed to urban education and serving the needs of our city's teachers. We are proud that almost 80 percent of Brooklyn's high school teachers are graduates of our programs. Our courses are particularly sensitive to the rich diversity of New York's population and we continue to forge links with the borough's schools.

The graduate programs in secondary education and special subjects are responsive to the needs and experiences of those individuals who have chosen to devote themselves to teaching. Our programs offer experienced and beginning teachers opportunities to develop their classroom practice and to expand their knowledge of their particular discipline and the field of education as a whole. Courses are taught by nationally known scholars who have had experience teaching at elementary and secondary levels. Our programs combine rigorous and rewarding study in each discipline with intensive study of curriculum, pedagogy, and schools.

Graduates of our programs are trained in their specific discipline, in research methodologies, and in the critical analysis of curriculum, pedagogy, school culture, and the sociopolitical dimensions of schooling. The requirements below contain both general and program-specific information about these programs.

Please consult specific department listings for further information about these programs and matriculation requirements.

Master's degrees are offered in the following subject areas:

Secondary Education (grades 7-12):
- M.A., Biology teacher HEGIS code 0401.01; SED code 26742
- M.A., Chemistry teacher HEGIS code 1905.01; SED code 26766
- M.A., English teacher HEGIS code 1501.01; SED code 26811
- M.A., French teacher HEGIS code 1102.01; SED code 26797
- M.A., Mathematics teacher HEGIS code 1701.01; SED code 26734
- M.A., Physics teacher HEGIS code 1902.01; SED code 26762
- M.A., Social studies teacher HEGIS code 2201.01; SED code 26753
- M.A., Spanish teacher HEGIS code 1105.01; SED code 26800
- M.A.T. Adolescence Science Education (grades 7-12) HEGIS code 0834.00; SED program code 32663 (Concentration A); 32662 (Concentration B)
- M.A.T. Earth Science Teacher HEGIS code 1917.01; SED program code 33640 (Concentration A); 33641 (Concentration B)

Special Subjects (all grades):
- M.A., Music teacher HEGIS code 0832; SED code 26816
- Advanced Certificate, music education HEGIS code 0832; SED code 26817

Middle school subject areas (grades 5-9):
- M.A. General science teacher HEGIS code 0804.04; SED program code 26821 & 26820
- M.S., Middle childhood education teacher, mathematics specialist HEGIS code 0804.03; SED program code 26723

In addition, Brooklyn College, in conjunction with the New York City Department of education, offers an Alternative Certification program for qualified individuals who attend the college under a contractual arrangement with the Department of Education. After completing a pre-service preparation program at the college, individuals are recommended by the Department of Education of for a Transitional B Certificate, which validates the individual's service in a public school while completing the masters degree program. The masters degree program requirements in each subject area, as registered with the State Education Department under criteria set for Alternative Certification, differ from requirements set for individuals who are not holders of Transitional B Certificates and are not part of the NYC DOE/Brooklyn College collaboration. Not all programs operate all years.

M.A. degree program in middle childhood education (5-9) - general science teacher - generalist with a concentration in general science
HEGIS code 0804.04; SED program code 26820

Informed by the National Science Education Standards for the professional development of science educators, the program involves teachers in learning science content using the process of inquiry. The program is also committed to expanding the classroom to include the local environment and science-rich community resources such as zoos, parks, museums, nature centers and gardens. The program introduces future educators to scientific literature, media and technological resources that expand their science knowledge and their ability to access further knowledge.

This program does not lead to certification to teach Regents level science.

General matriculation requirements

Applicants must have 15 credits in science. Applicants for initial certification take the Multi-subject New York State Content Specialty Test.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, to be considered for matriculation.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

General degree requirements

Thirty to 45 credits are required for the degree depending on applicants' qualifications.

Students must complete 15 credits in courses in biology, chemistry, earth and environmental science, physics, and general science.

The program of study must be approved by the Program Head of Middle Childhood Science.

Students must complete the following education courses in the stated sequence: Secondary Education 7300T, 7301T, 7340T. All required education courses and some education electives require permission for registration as indicated in the Schedule of Classes.

Each student is evaluated individually based upon prior experiences. Based upon this evaluation and current certification requirements of the New York State Education Department, courses in education or another department may be substituted for required courses with permission of the Coordinator of General Science.

Middle childhood education generalist with a concentration in general science
This program leads to a Master of Arts in Education and a New York State Professional Certificate in Middle Childhood Education Generalist (grades 5-9).

Matriculation requirements for all three options below include 15 credits of science.

Option (A): 30 credits.

Matriculation requirements

Applicants must hold a New York State Initial Certificate in Middle Childhood Education (grades 5-9) or its equivalent.

Degree requirements

Thirty credits are required for the degree. In addition to Secondary Education 7310T, 7311T, 7320T, and 7340T, the following courses are required: 15 credits in graduate courses in: biology, chemistry, physics, earth and environmental science, and general science; an elective course selected from Secondary Education, Childhood and Special Education or Science.

Option (B): 30 credits.

This program leads to the Professional Certificate in Middle Childhood Education generalist (grades 5-9).

Matriculation requirements

Applicants must hold a New York State Initial Certificate in Childhood Education (grades 1-6) or its equivalent or a New York State Initial Certificate in Adolescence Education (grades 7-12) or its equivalent.

Degree requirements

Thirty credits are required for the degree.

In addition to Secondary Education 7310T, 7311T, 7320T, and 7340T, the following courses are required: 15 credits in graduate courses in: biology, chemistry, physics, earth and environmental science, and general science. Student teaching in grades 7-8 for those with Initial Certification in Childhood Education (Secondary Education 7332T) or grades 5-6 for those with Initial Certification in Adolescence Education (Secondary Education 7330T) or mentored teaching in middle childhood for full time teachers.

Option (C): 42 credits
This program leads to both New York State Initial and Professional Certificates in Middle Childhood Education generalist (grades 5-9).

Degree requirements

Forty-five credits are required for the degree.

Students must complete Secondary Education 7500X, 7501X, 7310T, and 7311T prior to student teaching, Secondary Education 7330T and 7332T. Students must obtain departmental permission to register for these courses.

In addition to the above, the following courses are required: Secondary Education 7503X, 7671T and 7340T, as well as 15 credits in graduate courses in: biology, chemistry, physics, earth and environmental science, and general science.

Secondary Education 7310T, 7311T, 7340T. All required education courses and some education electives require permission for registration as indicated in the Schedule of Classes.

Each student is evaluated individually based upon prior experiences. Based upon this evaluation and current certification requirements of the New York State Education Department, courses in education or another department may be substituted for required courses with permission of the Coordinator of General Science.

M.A. degree program in middle childhood education (5-9) - general science teacher - specialization in biology, chemistry, physics, or earth science
HEGIS code 0804.04; SED program code 26820

Informed by the National Science Education Standards for the professional development of science educators, the program involves teachers in learning science content using the process of inquiry. The program is also committed to expanding the classroom to include the local environment and science-rich community resources such as zoos, parks, museums, nature centers and gardens. The program introduces future educators to scientific literature, media and technological resources that expand their science knowledge and their ability to access further knowledge.

Certification requires the completion of a minimum of 30 credits within one science discipline including coursework at both the undergraduate and graduate level. This program leads to certification to teach Regents level science.

General matriculation requirements

Applicants to this program must submit scores on the Content Specialty Test (CST) in the discipline of specialization (biology, chemistry, physics or earth science.)

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a

minimum score of 650 on the paper-based test or 280 on the computer-based test or 114 on the internet-based test to be considered for matriculation.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

General degree requirements

Thirty to 39 credits are required for the degree depending on applicants' qualifications. Students must complete 15 credits in courses in biology, chemistry, earth and environmental science, physics, and general science.
Students who have not already completed 30 credits in the science discipline of specialization upon admission must take courses in that discipline until the 30 credit requirement has been met. Once the thirty credit requirement has been met, students may take additional coursework in a science other than the discipline of specialization.

The program of study must be approved by the Program Head of middle school science education.

Students must complete the following education courses in the stated sequence:
Secondary Education 7310T, 7311T, 7340T. All required education courses and some education electives require permission for registration as indicated in the Schedule of Classes.

Each student is evaluated individually based upon prior experiences. Based upon this evaluation and current certification requirements of the New York State Education Department, courses in education or another department may be substituted for required courses with permission of the Program Head of middle school science education.

Middle childhood education with a specialization in biology, chemistry, physics, or earth science
This program leads to a Master of Arts in Education and a New York State Professional Certificate in Middle Childhood Education with a specialization in biology, chemistry, physics, or earth science (grades 5-9). Matriculation requirements for all three options below include an undergraduate major in biology, chemistry, physics, or earth and environmental science or the equivalent.

Option (A): 30 credits.

Matriculation requirements

Applicants must hold a New York State Initial Certificate in Middle Childhood Education (grades 5-9) or its equivalent.

Degree requirements

Thirty credits are required for the degree.

In addition to Secondary Education 7310T, 7311T, 7320T and 7340T, the following courses are required: 15 credits in graduate courses in any of the following: biology, chemistry, physics, earth and environmental science, and general science; and an elective selected from Secondary Education; Childhood, Bilingual and Special Education; or Science.

Option (B): 30-33 credits

Matriculation requirements

Applicants must hold a New York State Initial Certificate in Childhood Education (grades 1-6) or its equivalent or a New York State Initial Certificate in Adolescence Education (grades 7-12) or its equivalent.

Degree requirements

Thirty to thirty-three credits are required for the degree.
In addition to Secondary Education 7310T, 7311T, 7320T, and 7340T, the following courses are required: 15 credits in graduate courses in any of the following: biology, chemistry, physics, earth and environmental science, and general science; and an elective Student teaching in grades 7-9 for those with Initial Certification in Childhood, Bilingual and Special Education (Secondary Education 7330T) or grades 5-6 for those with Initial Certification in Adolescence Education (Secondary Education 7332T) or mentored teaching in middle childhood for full time teachers.

Option (C): 39 credits

This program leads to both New York State Initial and Professional Certificates in Middle Childhood Education with a specialization in biology,

chemistry, physics, or earth science (grades 5-9).

Degree requirements

Thirty-nine credits are required for the degree.
Students must complete Secondary Education 7500X, 7310T, 7311T, prior to student teaching, SEED 7330T and 7332T. Students must obtain permission from the Program Head of middle school science education to register for these courses.

In addition to the above, the following courses are required: Secondary Education 7340T, 7503X, 7671X, and 15 credits in graduate courses in any of the following: biology, chemistry, physics, earth and environmental science, and general science.

Option (D): 36 credits

Matriculation requirements

Applicants must hold a New York State Transitional B Certificate in Middle Childhood Education: Biology, Chemistry, Earth Science, or Physics (grades 5-9). Requirements for the Transitional B Certificate are determined by the New York State Education Department.

This program leads to both New York State Initial and Professional Certificates in Middle Childhood Education with a specialization in biology, chemistry, physics, or earth science (grades 5-9).

Degree requirements

Thirty-six credits are required for the degree.

Students must complete Secondary Education 7500X, 7310T, 7311T, 7320X, 7503X, 7671T and 7340T. Students must obtain permission from the Program Head of middle school science education to register for these courses.

In addition to the above, 15 credits in graduate courses in any of the following: biology, chemistry, physics, earth and environmental science, and general science.

M.A.T. degree program in adolescence science education (grades 7-12)
HEGIS code 0834.00; SED program code 32663 (Concentration A); 32662 (Concentration B)

This program leads to the Master of Arts in Teaching (M.A.T.) degree, Adolescence Science Education (7-12), with specializations for biology teacher, chemistry teacher, earth science teacher, and physics teacher.
There are two concentrations: concentration A (SED program code 32663) leads to Professional Teacher Certification only; concentration B (SED program code 32662) leads to Initial and Professional Teacher Certification.

Matriculation requirements

Applicants must submit two appropriate letters of recommendation and are interviewed.
Applicants to concentration A must submit scores on the Content Specialty Test (CST) in the discipline of specialization and a copy of their NYS teacher certification. Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.
Concentration A requires a New York State Initial Certificate in Adolescence Science Education in a content area or its equivalent for admission.
Concentration B (pre-service) requires student teaching and is for applicants without NYS certification but possessing 30 or more credits in the discipline of certification.
Each student is evaluated individually based upon prior experiences. Based upon this evaluation and the current certification requirements of the New York State Education Department, courses in education or another department may be substituted for required courses with permission of the program coordinator. For transfer credits see the section, "Rules about transfer courses and credits," in the Graduate Bulletin for more updated and complete information.
International applicants whose first language is not English and who did not receive the equivalent of a four-year U.S. undergraduate education from an institution where English is the official language of instruction, must take the Test of English as a Foreign Language (TOEFL) and arrange to have official score reports sent to the Office of Admissions. See the section, "Additional admission requirements for students with international credentials," in the Graduate Bulletin or the program web page for more updated and complete information on minimum passing score requirements. At the discretion of the program, additional English courses may be required as a condition for admission.

Degree requirements

Thirty-three to 37 credits are required for the degree depending on the applicant's previous coursework, teaching experience, and the certificate(s) the applicant holds. Each candidate will be evaluated individually and a program of study will be prescribed. In addition, students must complete a research project under advisement of a faculty member in Secondary Education 7321T.

Concentration (A): 33 credits (for in-service teachers)

HEGIS code: 0834.00; SED program code 32663
This concentration leads to a New York State Professional Teaching Certificate in Adolescence Science Education (7-12), with specializations in either biology teacher, chemistry teacher, earth science teacher, or physics teacher. Applicants must hold a New York State Initial Teaching Certificate in Adolescence Science Education in a content area or its equivalent.
Students electing this concentration must complete the following requirements:
Secondary Education 7325X, 7671X, 7314X, 7320T, 7315X, 7324X, 7321T, and six (6) credits in science content and six (6) elective credits in Education or science, including general science, to be determined in consultation with and approval of the head of the program in adolescence science education.

Concentration (B): 37 credits (for pre-service teachers)
HEGIS code: 0834.00; SED program code 32662
This concentration leads to both New York State Initial and Professional Teaching Certification in Adolescence Science Education (7-12), with specializations in either biology teacher, chemistry teacher, earth science teacher, or physics teacher, and is designed for candidates who do not have Initial New York State Teaching Certification in Science.
Students electing this concentration must complete the following requirements:
Secondary Education 7325X, 7671X, 7314X, 7320T, 7315X, 7324X, 7321T, 7380T, 7381T, 7383T, 7542T, 7543T and six (6) credits in science content, including general science, to be determined in consultation with and approval of the head of the program in adolescence science education.

M.S. in Education degree program: middle childhood education teacher, mathematics specialist (grades 5-9) HEGIS code 0804.03; SED program code 26723

This program leads to the M.S. in Education and both New York State Initial and Professional Certificates in Middle Childhood Education with a specialization in teaching mathematics (grades 5-9).

Matriculation requirements

Applicants must have a minimum undergraduate grade point average of 3.00 for matriculation. A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 500 on the paper-based test or 173 on the computer-based test or 61 on the internet-based test before being considered for admission.

Students should note additional requirements found at the beginning of this section as well as in the sections "Admission" and "Academic Regulations and Procedures."

Degree requirements

Thirty to forty-five credits are required for the degree, depending on applicants' qualifications. Students will enroll in the appropriate course of studies listed below (Option A or B or C or D) based upon teaching experience, previous course work, and the teaching certificates they hold. Students must complete the following education courses in the stated sequence: SEED 7452X, SEED 7453X, SEED 7454T, SEED 7455T. All required education courses and some education electives require permission for registration as indicated in the Schedule of Classes.

Option (A): 30 credits

This option leads to New York State Professional Certification in Middle Childhood Education with a specialization in teaching mathematics (grades 5-9) or to Professional Certification for holders of Initial Certification in another area.

Matriculation requirements

Applicants must hold a New York State Initial Certificate in Middle Childhood Education (grades 5-9) or its equivalent or be seeking Professional Certification through attainment of a Masters Degree. Applicants must present 18 credits of mathematics, including two semesters of calculus before they can begin to take graduate mathematics classes.

Degree requirements

Thirty credits are required for the degree.
The following mathematics education courses, or mathematics education courses approved by the program adviser, are required:
SEED 7451X, SEED 7452X, SEED 7453X, SEED 7454T, and SEED 7455T.

Four of the following mathematics courses, or mathematics courses approved by the mathematics department chair or designee, are required:
MATH 7271T, MATH 7273T, MATH 7274T, MATH 7275T, MATH 7276T, MATH 7277T;
One of the following elective education courses, or an education course approved by the program advisor:
SEED 7671X, SEED 7502T, SEED 7472X, SEED 7503X, SEED 7465X.

Option (B): 30-32 credits

This option leads to both New York State Initial and Professional Certification in Middle Childhood Education with a specialization in teaching mathematics (grades 5-9).

Matriculation requirements

Applicants must hold a New York State Initial Certificate in Childhood Education (grades 1-6) or its equivalent or a New York State Initial Certificate in Adolescence Education (grades 7-12) or its equivalent and be seeking certification in Grades 5-9. Applicants must present 18 credits of mathematics, including two semesters of calculus before they can begin to take graduate mathematics courses.

Degree requirements

Thirty to thirty-two credits are required for the degree.
The following mathematics education courses, or mathematics education courses approved by the program adviser, are required:
SEED 7451X, SEED 7452X, SEED 7453X, SEED 7454T, and SEED 7455T.

Four of the following mathematics courses, or mathematics courses approved by the mathematics department chair or designee, are required:
MATH 7271T, MATH 7273T, MATH 7274T, MATH 7275T, MATH 7276T, MATH 7277T;
One of the following elective education courses, or an education course approved by the program advisor:
SEED 7671X, SEED 7502T, SEED 7472X, SEED 7503X, SEED 7465X.

(c) One semester of student teaching in grades 7-8 for those with Initial Certification in Childhood Education (Grades 1-6) or one semester of student teaching in grades 5-6 for those with Initial Education Certification in Adolescence Education (Grades 7-12) SEED 7542T or SEED 7543T.

Option (C): 30-45 credits

This option leads to both New York State Initial and Professional Certificates in Middle Childhood Education with a specialization in teaching mathematics (grades 5-9).

It is recommended that applicants to this Option begin their program in a Spring semester.

Matriculation requirements

Applicants must present 18 credits of mathematics, including two semesters of calculus before they can begin to take graduate mathematics classes.

Degree requirements

Thirty to forty-five credits are required for the degree.

This option, for students without certification to teach, leads to both New York State Initial and Professional Certification in Adolescence Education in teaching mathematics for grades 5-9.

The following four education courses are required unless candidates have taken one or more as part of previous coursework. Foundations: SEED 7500X, SEED 7501X; Special Education: SEED 7671X, and Literacy: SEED 7503X.

The following student teaching courses are required unless candidates have a New York State waiver:
SEED 7538T, and SEED 7539T.
(SEED 7500X and SEED 7501X must be completed before student teaching)

The following mathematics education courses, or mathematics education courses approved by the program adviser, are required:
SEED 7451X, SEED 7452X, SEED 7453X, SEED 7454T, and SEED 7455T.

(a) Four of the following mathematics courses, or mathematics courses approved by the mathematics department chair or designee, are required:
MATH 7271T, MATH 7273T, MATH 7274T, MATH 7275T, MATH 7276T, MATH 7277T;

Option (D): 30-39 credits

This option leads to both New York State Initial and Professional Certificates in Middle Childhood Education with a specialization in teaching mathematics (grades 5-9).

Matriculation requirements

Applicants must hold a New York State Transitional B Certificate in Middle Childhood Education (grades 5-9) or its equivalent.

Applicants must present 18 credits of mathematics, including two semesters of calculus before they can begin to take graduate mathematics classes.

Degree requirements

Thirty to thirty-nine credits are required for the degree.

The following four education courses are required unless candidates have taken one or more as part of previous coursework. Foundations: SEED 7500X, SEED 7501X; Special Education: SEED 7671X; and Literacy: SEED 7503X.

The following mathematics education courses, or mathematics education courses approved by the program adviser, are required:
SEED 7451X, SEED 7452X, SEED 7453X, SEED 7454T, and SEED 7455T.

Four of the following mathematics courses, or mathematics courses approved by the mathematics department chair or designee, are required:
MATH 7271T, MATH 7273T, MATH 7274T, MATH 7275T, MATH 7276T, MATH 7277T.

M.A. degree program in education: biology teacher (7-12)
HEGIS code 0401.01; SED program code 26742

Based on the required background in science, this program develops the student's knowledge of biology. Courses from the Department of Biology and the School of Department of Secondary Education are required. In the Department of Biology, courses are chosen from the offerings described for the master of arts, biology program. In the Department of Secondary Education, coursework is chosen from the following areas of study: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; and methods of teaching biology in grades 7-12. Also included are fieldwork and student teaching of biology. The program prepares students to teach biology and related sciences in secondary schools. Courses required for the degree vary depending on the entry qualifications of students. All students should consult the Head of the program in adolescence science education for the current requirements.

The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the Head of the program in adolescence science education for the current requirements.

Matriculation requirements

Applicants must offer adequate preparation in the following, with an average grade of B or higher in biology courses: general biology; general physics; an advanced course in botany, zoology, general physiology, and genetics; and two terms of organic chemistry.

Applicants must also offer (a) or (b):

(a) New York State Initial Certification in Adolescence Education in teaching biology for grades 7-12;

Courses in education or equivalent course work and teaching experience that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching biology in grades 7-12; 100 hours of fieldwork; 40 full days or 300 hours of student teaching of biology in grades 7-12, or one year of full-time teaching of biology in grades 7-12; passage of edTPA.

(b) an undergraduate degree with a major in biology or appropriate course work in biology.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) before being considered for admission. For more updated and complete information on minimum passing scores see the section on additional admission requirements for students with international credentials in the Graduate Bulletin or the program web page. At the discretion of the program, additional English courses may be required as a condition for admission.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the Head of the program in adolescence science education in the School of Education and the chairperson of the Biology Department.

Applicants should see the Head of the program in adolescence science education for advisement.

General matriculation and admission requirements of the Division of Graduate Studies are in the chapter "Admission."

Degree requirements

A minimum of 34 credits is required for the degree.

Students must complete 22 credits in biology and related areas.

Students must also complete either Option A or B below. With the approval of the science education program head, students enroll in the appropriate Option A or Option B based upon teaching experience, previous course work, and the teaching certificates they hold.

Option A (for in-service teachers):34 credits

This option is for students who possess a New York State Initial Certification in teaching biology grades 7-12, or its equivalent.

Students must complete 12 credits in courses in the Department of Secondary Education. Students take different education courses and sequences of courses depending on their previous course work, teaching experience, and the certificates they hold. Students who possess Initial Certification in teaching biology must complete all of the following:
SEED 7502T or SEED 7324X, SEED 7500X or SEED 7315X, SEED 7340T or SEED 7320T, and 7503X or 7038X or SEED 7325X.

Option B (for pre-service teachers):34-50 credits

Students who do not possess Initial Certification in teaching biology or equivalent course work and teaching experience or who are teaching but do not possess Initial Certification in teaching biology must have the appropriate course work and credits in the subject area and must complete appropriate courses in (a), (b) and (c) below:
(a) SEED 7500X or SEED 7315X, SEED 7501X or SEED 7314X, SEED 7502T or SEED 7324X, SEED 7503X or SEED 7325X, SEED 7340T or SEED 7320T.
(b) SEED 7380T, SEED 7381T, SEED 7383T, SEED 7542T, SEED 7543T.
(c) SEED 7671X.
The student teaching methods course (SEED 7380T) must precede the student teaching seminars (SEED 7381T and SEED 7383T) and field experience (SEED 7542T and SEED 7543T).
Students who wish to register for student teaching seminar and field placement in the science education program will need to file an application with the science education program head for permission. See program office for details.

Students must pass a comprehensive examination or submit a thesis acceptable to the Biology Department. Information about requirements for the comprehensive examination and the thesis is in the chapter "Academic Regulations and Procedures."

The program of study must be approved early in the first semester by the chairperson or the deputy chairperson of the Biology Department and the Head of the program in adolescence science education in the School of Education.

M.A. degree program in education: chemistry teacher (7-12) HEGIS code 1905.01; SED program code 26766

Students choosing this program gain in-depth knowledge of some area of modern organic, inorganic, quantum chemistry, biochemistry or instrumental analysis. Seminar courses provide exposure to diverse subject matter in areas of current research interest within the department and beyond. Students also receive a detailed introduction to the use of the teaching laboratory in adolescent education. The School of Education component prepares students for teaching; the required courses vary depending on the entry qualifications of students. The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the Head of the program in adolescence science education for the current requirements.

Matriculation requirements

Applicants must offer courses in chemistry as follows: one year of general chemistry; a comprehensive course in organic chemistry (may be one or two terms depending on curriculum) one term of physical chemistry; and one semester of analytical chemistry.

Applicants must also offer (a) or (b):

(a) New York State Initial Certification in teaching chemistry grades 7-12; or
courses in education or equivalent course work and teaching experience that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching chemistry in grades 7-12; 100 hours of fieldwork; 40 days or 300 hours of student teaching chemistry in grades 7-12, or one year of full-time teaching of chemistry in grades 7-12; passage of the edTPA.

(b) An undergraduate degree with a major in chemistry or appropriate course work in chemistry.

Applicants must have a minimum undergraduate scholastic index of 3.00. A minimum average of 3.00 in graduate courses is required to maintain

matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) before being considered for admission. For more updated and complete information on minimum passing scores see the section on additional admission requirements for students with international credentials in the Graduate Bulletin or the program web page. At the discretion of the program, additional English courses may be required as a condition for admission.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the Head of the program in adolescence science education in the School of Education and the chairperson of the Chemistry Department.

Applicants should see the Head of the program in adolescence science education for advisement.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

A minimum of 30 credits are required for the degree.

Students must complete at least 12 credits in Chemistry. This must include at least one of the following courses: Chemistry 7761G, 7550G, 7571G, 7670G or 7640G.

Students must also complete either Chemistry 7450G or 7950.

Six of the remaining 18 credits required for the degree may be taken in the Chemistry Department or in other science subjects directly related to chemistry.
Students must also complete either Option A or B below. With the approval of the science education program head, students enroll in the appropriate Option A or Option B based upon teaching experience, previous course work, and the teaching certificates they hold.

Option A (for in-service teachers): 30 credits
This option is for students who possess a New York State Initial Certification in teaching chemistry grades 7-12, or its equivalent.
Students must complete 12 credits in courses in the Department of Secondary Education. Students take different education courses and sequences of courses depending on their previous course work, teaching experience, and the certificates they hold. Students who possess Initial Certification in teaching chemistry must complete all of the following:
SEED 7502T or SEED 7324X, SEED 7500X or SEED 7315X, SEED 7340T or SEED 7320T, and SEED 7503X or SEED 7038X or SEED 7325X.

Option B (for pre-service teachers):30-46 credits
Students who do not possess Initial Certification in teaching chemistry or equivalent course work and teaching experience or who are teaching but do not possess Initial Certification in teaching chemistry must have the appropriate course work and credits in the subject area and must complete appropriate courses in (a), (b) and (c) below:
(a) SEED 7500X or SEED 7315X, SEED 7501X or SEED 7314X, SEED 7502T or SEED 7324X, SEED 7503X or SEED 7325X, SEED 7340T or SEED 7320T.
(b) SEED 7380T, SEED 7381T, SEED 7383T, SEED 7542T, SEED 7543T.
(c) SEED 7671X.

Students who wish to register for student teaching seminar and field placement in the science education program will need to file an application with the science education program head for permission. See program office for details.
Students must pass a comprehensive examination or submit a thesis acceptable to the Chemistry Department. Information about requirements for the comprehensive examination and the thesis is in the chapter "Academic Regulations and Procedures."

Courses in the Chemistry Department or other science departments and the School of Education offered toward the degree must be 7000-level courses.
The program of study must be approved early in the first semester by the chairperson or the deputy chairperson of the Chemistry Department and the Head of the program in adolescence science education.

M.A. degree program in education: English teacher (7-12) HEGIS code 1501.01; SED program code 26811

The M.A. programs in English education leading to Initial Certification and/or Professional Certification for English teachers grades 7-12 are designed for students who plan to teach or are currently teaching. The programs offer experienced and beginning teachers opportunities to develop their classroom practice and to expand their knowledge of English education and the field of education as a whole. Courses are taught by nationally known scholars, many of whom have had experience teaching at secondary levels. Our programs combine rigorous and rewarding study in literature and composition with intensive study of curriculum, pedagogy, and schools.

The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the Department of Secondary Education for the current requirements.

Matriculation requirements

Applicants must offer at least 15 credits in advanced courses in English.

Applicants must also offer (a) or (b) or (c):

(a) New York State Initial Certification in teaching English for grades 7-12; or courses in education that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching English at appropriate age levels; 100 hours of fieldwork; 300 hours or 40 full days of student teaching English at appropriate grade levels, or one year of full-time teaching English at appropriate grade levels, and passagae of edTPA.

(b) an undergraduate degree with a major in English, or appropriate coursework in English;

(c) an undergraduate major in English, the Content Specialty Test CST, an approved 200 hours preparation program and a position at an approved public school through which students can accrue on-the-job training to substitute for student teaching.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the head of the program in English education and the chair or graduate deputy of the English Department.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 650 on the paper-based test or 280 on the computer-based test or 114 on the internet-based test, before being considered for admission.

Students should note additional requirements found in the sections "Admission" and "Academic Regulations and Procedures" in the Graduate Bulletin.

Degree requirements

Thirty to forty-six credits are required for the degree.

Students must complete 18 credits in courses in English.

Students enroll in the appropriate course of studies listed below (Option A or B or C) based upon teaching experience, previous course work, and the teaching certificates they hold.

Option (A): 30 credits

Students who possess Initial Certification in teaching English or its equivalent must complete the following courses in English: English 7010X and 7011X. In addition, students must complete a course in four of the seven areas of study listed under the M.A. in English in the Bulletin, as follows: three courses from areas 1-5 and 7, excluding English 7507X; and one course from area 6. Student must also complete 12 credits in courses in Education as follows: SEED 7502T, 7508T, 7548X and 7521T.

Option (B): 30-46 credits

Students who do not possess Initial Certification in teaching English or its must complete the following courses in English: English 7010X, English 7011X and English 7507X.

In addition, and with advisement from the chair or graduate deputy of the English department, students must complete a course in two of the seven areas of study listed under the M.A. in English in the Bulletin, as follows: two courses from areas 1-4 and 7; and one course from area 6. Depending on previous coursework, students must also complete some or all of the following courses in Secondary Education: SEED 7500X, 7501X, 7531T, 7542T, 7514T, 7543T, 7502T, 7508T, 7521T, and 7671T.

Option (C): 36 credits

Students who are teaching or have secured a position teaching English and who are pursuing an Alt B Certificate must complete the following courses in English: English 7010X, English 7011X and English 7507X. In addition, and with advisement from the chair or graduate deputy of the English department, students must complete a course in two of the seven areas of study listed under the M.A. in English in the Bulletin, as follows: two courses from areas 1-4 and 7; and one course from area 6. Students pursuing an Alt B Certificate may substitute their teaching job for student teaching but upon consultation with their advisor must still register for SEED 6002T and must take SEED 7500X, 7531T, 7514T, 7502T, 7671T, and 7508T.

All students must pass a written comprehensive examination administered by the English Department at the end of their program. Information about the comprehensive examination is in the section of the "Academic Regulations and Procedures."

Courses in the English Department and the School of Education offered toward the degree must be 7000-level courses.

Students pursuing an M.A. English Teacher must have taken or must take courses that meet the New York State and National Council of Teachers of English NCTE English standards. Transcript review will determine what appropriate course work students must take.

M.A. degree program in education: French teacher (7-12) HEGIS code 1102.01; SED program code 26797

The Department of Modern Languages and Literature in conjunction with the Department of Secondary Education, offers a master of arts degree in education for French teachers (grades 7-12). The New York State Education Department licenses graduates of registered teacher education programs who meet the state requirements for teachers. All students should consult with the Department of Secondary Education for current requirements.

This master of arts program provides students with an introduction to the French/Francophone literature. At the same time, the focus on language and culture fully prepares students for employment as foreign language teachers at the middle and high school levels.

Coursework is divided between the Department of Modern Languages and Literatures (six courses) and the Department of Secondary Education. The courses required by the Department of Secondary Education vary depending on the entry qualifications of students. The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change.

Matriculation requirements

Applicants must offer at least 18 credits in advanced courses in French.
Applicants must also offer (a) or (b):
(a) New York State Initial Certification in French teacher grades 7-12 or courses in education that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching French in grades 7-12; 100 hours of fieldwork; 40 full days or 300 hours of student teaching of French in grades 7-12; or one year of full-time teaching French at appropriate grade levels, and passage of edTPA.
(b) an undergraduate degree with a major in French or appropriate course work in French.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of at least 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the chairperson of the Department of Secondary Education and the chairperson of the Department of Modern Languages and Literatures.
General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty to forty six credits are required for the degree.
Students must complete requirements in French as follows:
French 7010X; 7510X or 7520X; Students must pass a written and oral comprehensive examination or complete both (a) and (b):
(a) complete 12 credits of course work in addition to the credits otherwise required;
(b) and write a substantial research paper, in French, acceptable to the Department of Modern Languages and Literatures.

Information about the comprehensive examination is in the section "Academic Regulations and Procedures."

Courses in the Modern Languages and Literatures Department and the School of Education offered toward the degree must be 7000-level courses. The program of study must be approved early in the first semester by the chairperson or deputy chairperson of the Modern Languages and Literatures Department and the chairperson of the Department of Secondary Education.

Students enroll in the appropriate education courses listed below (Option A or B) based upon teaching experience, previous course work, and the teaching certificates they hold.

Option (A): 30 credits
Students who possess Initial Certification in teaching French or the equivalent must complete the following courses in Secondary Education: SEED 7502T, SEED 7510T, SEED 7548X, and SEED 7523T.

Option (B) 30-46 credits
Students who do not possess Initial Certification in teaching French or the equivalent must, depending on their previous coursework, complete some or all of the following courses in Secondary Education: SEED 7500X, SEED 7501X, SEED 7534T, SEED 7542T, SEED 7516T, SEED 7543T,

SEED 7671X, SEED 7502T, SEED 7548X and SEED 7523T.

M.A. degree program in education: mathematics teacher (7-12)
HEGIS code 1701.01; SED program code 26734

The Mathematics Department, in conjunction with the Department of Secondary Education, offers a master of arts degree in education for mathematics teachers (grades 7-12). The New York State Education Department licenses graduates of registered teacher education programs who meet the state requirements for teachers. Applicants must consult matriculation requirements for adolescence education and special subjects in the Department of Secondary Education section of the Bulletin, and should see the chairperson of the Department of Secondary Education for counseling.

The department also participates in a master of science degree program for middle childhood education specialists in math (grades 5-9), with extensions for gifted education at initial and professional certification levels.

The Mathematics Department, in conjunction with the Department of Secondary Education, offers a master of arts degree in education for mathematics teachers (grades 7-12).

This program leads to the M.A. in Education and both New York State Initial and Professional Certification in Adolescence Education in teaching mathematics for grades 7-12.

Matriculation requirements

Applicants must have an undergraduate degree in mathematics, mathematics education grades 7-12, or 18 credits in advanced mathematics including the following: multivariable calculus, linear algebra, abstract algebra, geometry, analysis/advanced calculus, probability and statistics, as approved by the chairperson of the mathematics department and the advisor of the mathematics education (7-12) program. Prospective students who do not hold Initial Certification are recommended to begin the program in the spring semester.

Applicants must have a minimum undergraduate grade point average of 3.00 for matriculation. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of at least 500 on the paper-based test, or 173 on the computer-based test, or 61 on the internet-based test before being considered for admission.

Applicants who do not meet all of the specific requirements will be given individual consideration and may be admitted with conditions, with the approval of the chairperson of the Secondary Education Department and the chairperson of the Mathematics Department.

Applicants must consult matriculation requirements for adolescence education and special subjects in the School of Education section of the Bulletin, and should see the Department of Secondary Education for advisement. General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission".

Degree requirements

For students who hold New York State certification in mathematics (7-12), thirty credits are required for the degree. For students without New York State certification in mathematics (7-12), thirty to forty-five credits are required for the degree. Students must complete the following education courses in the stated sequence: SEED 7462X, SEED 7463X, SEED 7544T, SEED 7464T. All required education courses and some education electives require permission for registration as indicated in the Schedule of Courses.

Option A: 30 credits

This option leads to New York State Professional Certification in Adolescence Education in teaching mathematics for grades 7-12.

Matriculation requirements

Applicants must hold a New York State Initial Certification in Adolescence Education in teaching mathematics for grades 7-12.

Degree requirements

Thirty credits are required for the degree.

The following mathematics education courses, or mathematics education courses approved by the program adviser, are required:
SEED 7461T, SEED 7462T, SEED 7463T, SEED 7544T, and SEED 7464T.

The following mathematics courses, or mathematics courses approved by the mathematics department chair or designee, are required:
MATH 7305T, MATH 7307T, MATH 7309T or MATH 7311T.

One of the following elective education courses, or an education course approved by the program adviser, is required: SEED 7465X, SEED 7472X, SEED 7502T, SEED 7503X, or SEED 7671X.

Option B: 30-45 credits

This option, for students without certification to teach, leads to both New York State Initial and Professional Certification in Adolescence Education in teaching mathematics for grades 7-12.

It is recommended that applicants to this Option begin their program in a Spring semester.

Degree requirements

Thirty to forty-five credits are required for the degree.

This option leads to both New York State Initial and Professional Certification in in Adolescence Education in teaching mathematics for grades 7-12.

The following four education courses are required unless candidates have taken one or more as part of previous coursework. Foundations: SEED 7500X, SEED 7501X; Special Education: SEED 7671X, and Literacy: SEED 7503X.

The following two student teaching courses are required unless candidates have a New York State waiver: SEED 7538T, and SEED 7539T. (SEED 7500X and SEED 7501X must be completed before student teaching).

The following mathematics education courses, or mathematics education courses approved by the program adviser, are required: SEED 7461T, SEED 7462T, SEED 7463T, SEED 7544T, and SEED 7464T.

The following mathematics courses, or mathematics courses approved by the mathematics department chair or designee, are required: MATH 7305T, MATH 7307T, MATH 7309T or MATH 7311T.

Option C: 30-39 credits

This option leads to both New York State Initial and Professional Certification in in Adolescence Education in teaching mathematics for grades 7-12.

Matriculation Requirements:

Applicants must hold a New York State Transitional B Certificate in Adolescence Education in teaching mathematics for grades 7-12.

Degree requirements:

Thirty to thirty-nine credits are required for the degree.

The following courses in education are required unless candidates have taken one or more as part of previous coursework: SEED 7500X, SEED 7501X, SEED 7503X, and SEED 7671X.

The following mathematics education courses, or mathematics education courses approved by the program adviser, are required: SEED 7461T, SEED 7462T, SEED 7463T, SEED 7544T, and SEED 7464T.

The following mathematics courses, or mathematics courses approved by the mathematics department chair or designee, are required: MATH 7305T, MATH 7307T, MATH 7309T or MATH 7311T.

M.A. degree program in education: music teacher (all grades) HEGIS code 0832; SED program code 26816

The Conservatory of Music in conjunction with the Department of Secondary Education, offers a master of arts degree in education for Music teachers (all grades). The New York State Education Department licenses graduates of registered teacher education programs who meet the state requirements for teachers.

The master of arts, music teacher degree is for certified music educators who are working towards their permanent certification. Students in the M.A., music teacher program have the opportunity to explore musical topics beyond the realm of music education by participating in graduate seminars in music history, music theory, performance practice, and conservatory ensembles, while taking advanced courses in the history and theory of music education. 30 credits in graduate level music courses are required. (Graduate level School of Education courses may be used as electives.) Students can either complete a thesis or education project, or complete 33 credits without a project. All students should consult with the School of Education for the current requirements.

Matriculation requirements

In addition to meeting the general matriculation and admission requirements of the Division of Graduate Studies, applicants must hold either a B.A. in music teaching or a B.Mus. in music education. Also eligible to apply are (a) students holding other music bachelor's degrees with sufficient course work in education and music education to be permitted to take student teaching, or (b) students holding a bachelor's degree with at least 36 credits in music courses, including an array of analysis, counterpoint, harmony, history, conducting, performance, education, and music education courses sufficient for admission to student teaching in music. Requirements for student teaching are available from the coordinator of music education.

Applicants must submit a copy of their New York State teaching certificate. Applicants must have a minimum undergraduate grade point average of 3.00. International applicants for whom English is a second language must have attained a TOEFL score of at least 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, to be considered for admission.

Applicants must pass a performance audition and music education interview and submit a portfolio including such items as résumé, writing sample, and evidence of teaching experience.

A placement examination covering music history, theory,and analysis is given to all applicants for admission. Further information about the examination is available from the assistant director of the Conservatory of Music.

The student's program must be planned and approved by the coordinator of music education and approved by the assistant director. Courses in the conservatory offered toward the degree must be 7000-level courses.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty to 33 credits are required for the degree.

The following courses are required:

1. Music U7400G.

2. One course chosen from Music Music U7601G-U7606G, 7631G, U7650X, 7651X, 7850X or 7860X.

3. One course chosen from Music 7632G, 7641X, 7642X.

4. Two courses chosen from Music 7700X through 7781X.

5. One course chosen from Education [724.12T], Music 7000G, or Music 7010T.

6. Music 7201X and 7170T.

7. One course chosen from Music 7101X, 7121X, 7122X, 7150T, 7633X.

8. Four credits in music, music performance (studio lessons and/or ensembles), music education, or education electives.

9. Thesis (Music U7930X) or Music Education Master's Project (Music 7920T) or an additional 6 credits in music, music performance (studio lessons and/or ensembles), music education, or education electives.

Students must pass a comprehensive examination. Information about requirements for the comprehensive examination is in the section "Academic Regulations and Procedures" of the Graduate Bulletin.

M.A. degree program in education: physics teacher (7-12)
HEGIS code 1902.01; SED program code 26762

The M.A., physics teacher program prepares students for a career in teaching at the high school level. It includes courses in education, as well as physics, which are designed to help graduate students become more effective high school physics teachers. The courses required by the Department of Secondary Education vary depending on the entry qualifications of students.

The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the Head of the program in adolescence science education for the current requirements.

Matriculation requirements

Applicants must offer at least 12 credits in physics beyond general physics.

Applicants must also offer (a) or (b):

(a) New York State Initial Certification in physics for grades 7-12; or courses in education or equivalent course work and teaching experience that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching physics in grades 7-12; 100 hours of fieldwork; 40 full days or 300 hours of student teaching of physics in grades 7-12, or one year of full-time teaching of physics in grades 7-12; passage of edTPA.

(b) an undergraduate degree with a major in physics or appropriate course work in physics.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) before being considered for admission. For more updated and complete information on minimum passing scores see the section on additional admission requirements for students with international credentials in the Graduate Bulletin or the program web page. At the discretion of the program, additional English courses may be required as a condition for admission.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the Head of the program in adolescence science education in the School of Education and the chairperson of the Physics Department.
Applicants must consult matriculation requirements for adolescence education and special subjects in the School of Education section of the Bulletin, and should see the Head of the program in adolescence science education for counseling.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

A minimum of thirty credits is required for the degree.

Students must complete 12 credits in courses in the Physics Department including 6 credits in courses on the 7000 level.
Students must also complete either Option A or B below. With the approval of the science education program head, students enroll in the appropriate Option A or Option B based upon teaching experience, previous course work, and the teaching certificates they hold.

Option A (for in-service teachers): 30 credits
This option is for students who possess an New York State Initial Certification in teaching physics grades 7-12, or its equivalent.
Students must complete 12 credits in courses in the Department of Secondary Education. Students take different education courses and sequences of courses depending on their previous course work, teaching experience, and the certificates they hold. Students who possess Initial Certification in teaching physics must complete all of the following:
SEED 7502T or SEED 7324X, SEED 7500X or SEED 7315X, SEED 7340T or SEED 7320T, and SEED 7503X or SEED 7038X or SEED 7325X.
Six credits of electives. These courses may be in education and/or in related science content.

Option B (for pre-service teachers):30-40 credits
Students who do not possess Initial Certification in teaching physics or equivalent course work and teaching experience or who are teaching but do not possess Initial Certification in teaching physics must have the appropriate course work and credits in the subject area and must complete appropriate courses in (a), (b) and (c) below:
(a) SEED 7500X or SEED 7315X, SEED 7501X or SEED 7314X, SEED 7502T or SEED 7324X, SEED 7503X or SEED 7325X, SEED 7340T or SEED 7320T.
(b) SEED 7380T, SEED 7381T, SEED 7383T, SEED 7542T, SEED 7543T.
(c) SEED 7671X.

Students who wish to register for student teaching seminar and field placement in the science education program will need to file an application with the science education program head for permission. See program office for details.
Students must pass a comprehensive examination or submit a thesis acceptable to the Department of Physics, the choice to be made in consultation with the deputy chairperson of the Physics Department. Information about requirements for the comprehensive examination and the thesis is in the section "Academic Regulations and Procedures."

The program of study must be approved early in the first semester by the chairperson or deputy chairperson of the Physics Department and the Head of the program in adolescence science education in the School of Education.

M.A. degree program in education: social studies teacher (7-12)
HEGIS code 2201.01; SED program code 26753

This program leads to New York State Initial or Professional Certification to teach social studies, grades 7-12. The length of the program depends on the individual's prior preparation: 30 credits for an individual entering with less than 21 credits in history and initial teaching certification; 30-45 credits for an individual who does not possess initial certification.
Graduates must hold more than 21 credits in history and/or geography to be recommended for NYS certification. Individuals entering without initial

certification spend two terms student teaching -- one term in a middle/junior high school; one term in a senior high school. All students should consult with the School of Education for the current requirements.

The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the School of Education for the current requirements.

Matriculation requirements

Applicants must offer a distribution approved by the social studies program coordinator of at least 21 credits in upper division undergraduate or graduate courses in one or more of the following: economics, geography, history, sociology, and/or political science, including 15 credits in history.

Applicants must also offer (a) or (b):

(a) New York State Initial Certification in teaching social studies for grades 7¬12; or courses in education that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching social studies in grades 7-12; 100 hours of fieldwork; 40 full days or 300 hours of student teaching of social studies in grades 7-12 or one year of full-time teaching of social studies in grades 7-12; and passage of edTPA.

(b) An undergraduate degree with an appropriate major or appropriate course work in the appropriate subject areas.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation. Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the chairperson of the Department of Secondary Education in the School of Education and the program coordinator of social studies.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 650 on the paper-based test or 280 on the computer-based test or 114 on the internet-based test, before being considered for admission.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admissions."

Degree requirements

A minimum of 30-49 credits are required for the degree.

Fifteen credits must be chosen from the field(s) of the Social Studies: History, Political Science, Economics, Sociology. Students must take SEED 7584 and choose at least one course from each of the distribution areas listed below, with a minimum of nine credits in history (not all courses will run every semester):

1) Economics: Economics 7215X, 7055X and HIST 7120X, 7441X.

2) U.S. Constitution: History 7412X, 7448X and POLS 7200X, 7210X.

3) European History: History, 7210X, 7220X, 7120X, 7230X, 7310X, 7320X, 7370X, 7380X and Sociology 7322X.

4) Global: History 7110X, 7512X, 7515X, 7517X, 7540X, 7550X, 7552X, 7562X, 7580X, 7530X and Political Science 7610X, 7650X, 7720X, 7780X.

5) US History: History 7411X, 7412X, 7420X, 7425X, 7430X, 7440X, 7442X, 7446X, 7448X, 7441X, 7450X, 7460X; Political Science 7030X, 7320X, 7330X, 7470X, 7570X; Sociology 7341X, 7342X, 7352X.

Students must enroll in the appropriate education courses listed below (Option A or B) based upon teaching experience, previous course work, and the teaching certificates they hold.

Option (A): 30 Credits
Students who possess Initial Certification in teaching social studies, 7-12 or the equivalent must complete the following courses in Secondary Education: SEED 7502T, SEED 7671X, SEED 7509T and SEED 7522T.

Option (B) 30-46 credits
Students who do not possess Initial Certification in teaching social studies, 7-12 or the equivalent must, depending on previous coursework, complete some or all of the following courses in Secondary Education: SEED 7500X, SEED 7501X, SEED 7502T, SEED 7503X, SEED 7671X, SEED 7532T, SEED 7542T, SEED 7515T, SEED 7543T, SEED 7509T and SEED 7522T.

M.A. degree program in education: Spanish teacher (7-12)
HEGIS code 1105.01; SED program code 26800

The Department of Modern Languages and Literature in conjunction with the Department of Secondary Education, offers a master of arts degree in education for Spanish teachers (grades 7-12). The New York State Education Department licenses graduates of registered teacher education programs who meet the state requirements for teachers. All students should consult with the Department of Secondary Education for current requirements.

This master of arts program provides students with an introduction to the Peninsular/Latin American literature. At the same time, the focus on language and culture fully prepares students for employment as foreign language teachers at the middle and high school levels.

Coursework is divided between the Department of Modern Languages and Literatures (six courses) and the Department of Secondary Education. The courses required by the Department of Secondary Education vary depending on the entry qualifications of students.

The profession of teacher education is licensed by the New York State Education Department. Therefore, program requirements are subject to change. All students should consult with the School of Education for the current requirements.

Matriculation requirements

Applicants must offer at least 18 credits in advanced courses in Spanish.

Applicants must also offer (a) or (b):

(a) New York State Initial Certification in teaching Spanish grades 7-12 or
courses in education that meet the New York State standards for the pedagogical core. These courses include study of the following: history of education and philosophy of education or principles of education or educational sociology; educational psychology or developmental psychology or psychology of adolescence or adolescent development; classroom management; teaching students with special needs and English language learners; 6 credits in literacy and language acquisition; curriculum development and methods of assessing student learning; uses of technology in the classroom; methods of teaching Spanish in grades 7-12; 100 hours of fieldwork; 40 full days or 300 hours of student teaching of Spanish in grades 7-12; or one year of full-time teaching Spanish at appropriate grade levels, and passage of edTPA.

(b) an undergraduate degree with a major in Spanish or appropriate course work in Spanish.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a score of at least 550 on the paper-based test or 213 on the computer-based test or 79 on the internet-based test, before being considered for admission.

Applicants who have not completed all the specific course requirements are given individual consideration and may be admitted with conditions, with the approval of the chairperson of the Department of Secondary Education and the chairperson of the Department of Modern Languages and Literatures.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

30-46 credits are required for the degree.

Students must complete requirements in Spanish as follows:

Spanish 7010X; 7510X or 7520X; a course in American literature; and a course in Peninsular Spanish literature. Students must pass a written and oral comprehensive examination and complete a substantial final project, which may take the form of a thesis in Spanish, or may consist of a "teaching unit" completed under the co-direction of the Department of Modern Language and Literatures and the School of Education. Students may take the comprehensive examination beginning in the semester in which they will have earned 18 credits. The writing of the thesis or completion of the teaching unit will take place during a one credit tutorial, Spanish 7790X, to be taken as the final course of the student's program. Spanish 7790X, however, is not a required course for the degree. Information about the comprehensive examination is in the section "Academic Regulations and Procedures."

Students enroll in the appropriate education courses listed below (Option A or B) based upon teaching experience, previous course work, and the teaching certificates they hold.

Option (A): 30 credits

Students who possess Initial Certification in teaching Spanish or the equivalent must complete the following courses in Secondary Education: SEED

7502T, SEED 7510T, SEED 7548X, and SEED 7523T.

Option (B) 33-46 credits

Students who do not possess Initial Certification in teaching Spanish or the equivalent must complete, depending on previous course work some or all of the following courses in Secondary Education: SEED 7500X, SEED 7501X, SEED 7534T, SEED 7542T, SEED 7516T, SEED 7543T, SEED 7671X, SEED 7502T, SEED 7548X and SEED 7523T.

Courses in the Modern Languages and Literatures Department and the School of Education offered toward the degree must be 7000-level courses. The program of study must be approved early in the first semester by the chairperson or deputy chairperson of the Modern Languages and the Department of Secondary Education.

M.A.T. degree program: earth science teacher (grades 7-12)
HEGIS code 1917.01; SED program code 33640 (Concentration A); 33641 (Concentration B)

Matriculation requirements

Each candidate will be evaluated individually. Based upon this evaluation and certification requirements of the New York State Education Department, courses in education or another department may be substituted for required courses with permission of the Program Head of middle school science education. Applicants to Concentration A must have completed a minimum of six credits in earth and environmental science or in cognate sciences including chemistry and physics. Applicants to Concentration B must have completed a minimum of 9 credits in earth science and six credits in cognate sciences including chemistry and physics. Students deficient in science credits may be accepted on condition that they complete additional coursework as recommended by the Program Head of middle school science education.

This program leads to a Master of Arts in Teaching Earth Science, and a New York State Professional Teaching Certificate in Adolescent Science Education with a specialization in earth science in grades 7-12.

Applicants must have a minimum undergraduate grade point average of 3.00. A minimum grade point average of 3.00 in graduate courses is required to maintain matriculation.

International applicants for whom English is a second language are required to pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 500 650 on the paper based test or 280 on the computer based test or 61 114 on the internet based test to be considered for matriculation.

General matriculation and admission requirements of the Division of Graduate Studies are in the "Admission" section.

Degree requirements

Thirty to thirty-three credits are required for the degree depending on the applicants' previous coursework, teaching experience and the certificates the applicant holds.

Concentration (A): 30 credits (for in-service teachers)
This program leads to a New York State Professional Teaching Certificate in Adolescent Earth Science and General Science Education for in-service science teachers. Applicants must hold a New York State Initial Certification in classroom teaching and a minimum of six credits in earth and environmental science or in cognate sciences including chemistry and physics.
The following required courses: Earth Science and Environmental Science 7013T, 7040T, 7044T, and either 7006T or 7042T. Twelve additional credits in Earth Science and Environmental Science numbered 7000T or higher, or 7100 or higher with permission of the chairperson. Secondary Education 7340T and one of the following courses Secondary Education 7311T, 7305T, 7326T or 7320T.

Concentration (B): 30-36 credits (for pre-service teachers)
This option leads to both New York State Initial and Professional Teaching Certificates for pre-service science teachers. Applicants must have completed a minimum of 9 credits in Earth science and six credits in cognate sciences including chemistry and physics. Fifteen credits in Earth and Environmental Sciences numbered 7000T or higher, or 7100 or higher with permission of the chairperson. All of the following courses in education: Secondary Education 7500X, 7503X, 7312T or 7311T, 7320T, 7671T, and 7340T.

Other requirements that must be met include 100 hours of field experience, 40 days or 300 hours of student teaching at appropriate grade levels (Secondary Education 7332T and 7542T) or one year of full-time teaching at the appropriate subject area at appropriate grade level, completed study at the college level of a foreign language, and any additional New York State requirements.

Courses

SEED 6002T Issues and Strategies in Education

15 hours each term; 1 credit each term.
Timely issues, strategies, and techniques of modern educational practice. Course content varies from term to term. This course is not creditable toward the degrees in education. May be repeated for credit.

Prerequisite: license or certificate to serve as teacher, paraprofessional, or supervisor in day care center, kindergarten, or elementary or

secondary school.

SEED 6500X Psychological and Sociological Perspectives on Secondary Education and Adolescent Development
45 hours lecture, 30 hours laboratory; 4 credits
Psychological models of development and learning theories; sociology of education; schooling and distinctive community cultures in the United States; microteaching and community study. Not open to all students who have taken EDUC 6500X.

Prerequisite: permission of the Chairperson or Deputy of the Department of Secondary Education.

SEED 6501X Studies of Curriculum in Secondary Education

45 hours lecture, 30 hours laboratory; 4 credits
Curriculum issues in middle/secondary schools; interdisciplinary and integrated curricula; planning instructional lessons/units; testing and assessment; methods of teaching in middle schools; microteaching experiences and fieldwork in middle schools. Not open to all students who have taken EDUC 6501X.

Prerequisite or corequisite: SEED 6500X.

SEED 6503x Instructional Methods in Secondary Education

60 hours; 4 credits
Goals and objectives for teaching in secondary education; planning for instruction; classroom dialogue and questioning; evaluation and assessment; innovative teaching techniques; teaching of students with special needs; subject area curricula. Not open to students who have taken EDUC 6503X.

Prerequisite: Education 6500X [611X] and 6501X [612X].

SEED 6504X Student Teaching Practicum

120 hours laboratory; 3 credits
Student teaching practicum; students will observe classes, teach lessons, and participate in professional activities in a senior high school under the supervision of the course instructor and a cooperating teacher in the school. Not open to students who have taken EDUC 6504X.

Prerequisite: SEED 6500X [611X] and 6501X [612X].
Corequisite: SEED 6503X [613.1X].

SEED 6505T Seminar on Teaching Methods of Music Education
30 hours; 2 credits
Weekly seminar. Synthesis and application of knowledge and skill in human processes and variations, learning styles and processes, motivation, communication, classroom management, special needs, language acquisition and literacy development, curriculum development, instructional planning and strategies, technology and assessment, and the rights and responsibilities of all involved in the educational process, especially as applied to urban students. Workshops in identifying, reporting, and responding to child abuse and in substance abuse, fire and arson prevention, and safety education. Not open to students who have taken EDUC 6505T.

Prerequisite: permission of the director of the Conservatory of Music, and the Chairperson or Deputy of the Department of Secondary Education.
Completion of all coursework for the Advanced Certificate in Music Education (MUSC 6510T, 6581T, 6582T, 6583T, three courses from MUSC 6601T, 6661X, and MUSC 7201X).

Corequisite: SEED 6506T [665.1T].

SEED 6506T Student Teaching

300 hours; 4 credits
Supervised teaching of music in schools. Students spend the equivalent of forty days in schools, during which time they engage in daily, supervised student teaching as appropriate to the certificate. Not open to students who have taken EDUC 6506T.

Prerequisite: Permission of the director of the Conservatory of Music, and the Chairperson or Deputy of the Department of Secondary Education. Completion of all coursework for the Advanced Certificate in Music Education (MUSC 6510T, 6581T, 6582T, 6583T, three courses from MUSC 6601T-6661X, and MUSC 7201X).
Corequisite: SEED 6505T [665T].

SEED 7038X Special Topics in Education

45 hours; 3 credits
Selected topics or recent advances in education that reflect current interests, professional needs, and educational problems of teachers and other school personnel. Topics vary from term to term. Not open to all students who have taken EDUC 7038X

Prerequisite: license or certificate to serve as teacher, paraprofessional, or supervisor in day care center, kindergarten, elementary, or secondary school. Additional prerequisites may be required for a specific topic.

SEED 7039X Special Topics in Education

45 hours; 3 credits
Selected topics or recent advances in education that reflect current interests, professional needs, and educational problems of teachers and other school personnel. Topics vary from term to term. Not open to all students who have taken EDUC 7039X.

Prerequisite: license or certificate to serve as teacher, paraprofessional, or supervisor in day care center, kindergarten, elementary, or secondary school. Additional prerequisites may be required for a specific topic.

SEED 7040X Special Topics in Education

45 hours; 3 credits
Selected topics or recent advances in education that reflect current interests, professional needs, and educational problems of teachers and other school personnel. Topics vary from term to term. Not open to students who have taken EDUC 7040X.

Prerequisite: license or certificate to serve as teacher, paraprofessional, or supervisor in day care center, kindergarten, elementary, or secondary school. Additional prerequisites may be required for a specific topic.

SEED 7041T Honors Seminar in Education I, II

30 hours each term; 2 credits each term
Individual study and research supervised by a faculty member. A written report is required. Not open to students who have taken EDUC 7041T.

Prerequisite: 12 credits in graduate courses including at least two education courses; and evidence of superior scholarship, high professional promise, and capacity for self-directed study; and permission of the deputy for graduate studies.

SEED 7042T Honors Seminar in Education I, II

30 hours each term; 2 credits each term
Individual study and research supervised by a faculty member. A written report is required. Not open to students who have taken

EDUC 7042T.

Prerequisite: 12 credits in graduate courses including at least two education courses; and evidence of superior scholarship, high professional promise, and capacity for self-directed study; and permission of the deputy for graduate studies.

SEED 7310T Methodology in Middle Childhood and Adolescence Science Teaching I
45 hours plus conference, 15 hours field experience; 3 credits
Implementation, adaptation, and assessment in practice of research validated science curricula for middle childhood with an emphasis on the life and environmental sciences. Approaches to integrating language arts and social sciences in teaching and learning science; development of reading, oral and written communication skills in the sciences. Adapting pedagogy to the needs of English language learners and students with diverse learning styles. Examination of environmental ethics and issues. Field trips will be required. Not open to students who have taken EDUC 7310.

Prerequisite: matriculation in middle childhood science education.

SEED 7311T Methodology in Middle Childhood and Adolescent Science Teaching II
45 hours plus conference, 15 hours field experience; 3 credits
Continuation of Education 7310 [714.25]T. Methods of integrating science with math and technology in the middle school with an emphasis on physical and earth science. Developing quantitative and critical thinking skills. Design and assessment of inquiry- and problem-based curriculum integrating quantitative reasoning. Adapting methods to the needs of students with disabilities, and students with diverse learning styles. Purposes and types of student assessment. Field trips will be required. Not open to all students who have taken EDUC 7311T.

Prerequisite: SEED 7310T [714.25]T.

SEED 7312T Seminar I in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Science
45 hours, plus conference; 3 credits
Seminar concerning problems and issues in the organization of subject matter. Introduction to methods of instruction, curriculum development and assessment, classroom management, and developing school-community relationships. Focus on self-reflective teaching styles and assessment procedures to address the learning needs of a diverse student population, students with special needs, and English language learners. Preparation in literacy and language acquisition. Attention given to particular needs and interests of students and methods of integrating technology into the classroom. Role of materials and resources applied to teaching science at grade levels appropriate for state certification requirements. Not open to students who are enrolled in or have completed Secondary Education 7540T. Not open to all students who have taken EDUC 7312T.

Corequisite: SEED 7542T [764.5T].

SEED 7313X Physical and Life Science, Theory and Content I, Middle Childhood & Adolescence
45 seminar plus conference; 3 credits
Introductory course in teaching physical and life science. Analysis of instructional settings and strategies with a focus on science content, teaching and learning theories, inclusive classrooms, techniques of self-analysis, analysis of classroom interactions, literacy, and modes of communication in the classroom. Learning needs of English language learners, students with disabilities, community. Natural and physical sciences from a pedagogical perspective, the New York State and National Standards for science, the development of science curricula with appropriate student-based and differentiated class instruction and assessment, individual and professional teacher development. Field experience required, but might vary (20-40 hours). Not open to all students who have taken EDUC 7313X.

Corequisite: SEED 7323X [708.04X].

SEED 7314X Physical and Life Science Instruction and Learning I, Middle Childhood and Adolescence
45 hours seminar plus conference; 3 credits
Introductory content and methods course and differentiated instruction in physical and life sciences. Provides new and practicing teachers the opportunity to examine, discuss, create and revise the knowledge they need to become successful science teachers. Common themes in physical and life sciences and design curricula that enhance students' science investigative skills and critical thinking using principles of constructivism to guide the design and implementation process, and teaching practices. Addressed are creative writing and literacy, methods of inquiry, national, NYS and NYC Science Standards, science laboratory safety and skills, the scientific method, use of technology and web resources, science literacy, forms of assessment, scientific misconceptions, science in the community, and the teaching and learning of science in multicultural and diverse classrooms. Field experience (25 hours) required. Not open to all students who have taken EDUC 7314X.

SEED 7315X Historical, Philosophical, and Social Foundations of Education and Science
45 hours seminar plus conference ; 3 credits
Historical, philosophical, social and legal foundations of education. History of Western and non-Western science; history of science education. Cultural embeddedness of science; issues in science and science education. Not open to all students who have taken EDUC 7315X

SEED 7320T Foundations and Analysis of Teaching I
30 hours lecture, 30 hours laboratory; 3 credits
Educational research as applied to analysis of teaching and learning with an emphasis on science and environmental education. Discussion of a range of research methodologies including action research and uses of technology to access and process information in educational research to analyze functioning of teachers in urban schools with children of diverse abilities and backgrounds. Field trips will be required. Not open to all students who have taken EDUC 7320T.

SEED 7321T Seminar in Applied Theory and Research: Science and Environmental Education
30 hours lecture, 30 hours laboratory; 3 credits
Advanced concepts of educational research, including research study design and utilization of results of research. Application of techniques of research, using materials relevant to science and environmental education. Consultation and application in appropriate field settings. Design and implementation of an original research project. Field trips will be required. Not open to all students who have taken EDUC 7321T

SEED 7323X Physical and Life Science, Theory and Content II, Middle Childhood and Adolescence
45 hours seminar plus conference; 3 credits
Advanced course in teaching physical and life science. Analysis of instructional settings and strategies with a focus on science content, teaching and learning theories, techniques of self-analysis, analysis of classroom interactions, and modes of communication in the classroom. Natural and physical sciences from a pedagogical perspective, the New

York State and National Standards for science, use of technology to assist students, the development of science curricula with appropriate student-based and differentiated class instruction and assessment. Historical, social, and legal foundations of education, and rights and responsibilities of teachers, students and others with regard to education. Field experience required; may vary (20-40 hours). Not open to students who have taken EDUC 7323X.

Corequisite: SEED 7313X [707.04X].

SEED 7324X Physical and Life Science Instruction and Learning II, Middle Childhood & Adolescence
45 hours plus conference; 3 credits
Advanced content and methods course and differentiated instruction in physical and life sciences. Provides new and practicing teachers the opportunity to examine, discuss, create and revise the knowledge they need to become successful science teachers. Its central goals are to examine common themes in physical and life sciences and design curricula that enhance students; literacy, science investigative skills and critical thinking using principles of constructivism to guide the design and implementation process, and teaching practices. Topics in physical and life science curriculum and standards, methods of inquiry, the scientific method, science laboratory safety and skills, use of technology and web resources, science literacy, forms of assessment, science in the community, and teaching and learning science in multicultural and diverse classrooms. Development of science reading and writing skills, graphic organizers, literacy for students with special needs. Field experience (25 hours) required. Not open to all students who have taken EDUC 7324X

Prerequisite: SEED 7314X [711.04X].

SEED 7325X Middle Childhood and Adolescence Development, Culture, Cognition, and Language in Science Learning and Teaching
45 hours seminar plus conference; 3 credits
Developmental, psychological, and educational approaches to understanding and nurturing scientific curiosity and learning in middle childhood, and adolescent years. Exploration of learning theories, culture, race, gender, role of language and literacy; and implications for practice. Applying these considerations to science learning and teaching. Motivation and assessment. Considerations for learners with special needs, and diverse and gifted learners. Field experience (25 hours) and field study required. Not open to students who have taken EDUC 7325X.

SEED 7326T Seminar II in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Science
45 hours, plus conference; 3 credits
Advanced theories and methods of teaching science at grade levels appropriate for New York State certification requirements; focus on developing reflective practitioners and research based instruction; analysis of New York State Learning Standards in science; teaching science to all students, including students with special needs and English language learners; integrating technology into the classroom; developing, implementing, and evaluating the science curriculum in urban classrooms. Students enroll in workshops in identifying, reporting, and responding to child abuse and in substance abuse, fire and arson prevention and safety education. Not open to students who have taken EDUC 7326T.

Prerequisite: SEED 7500X [742X], 7501X [792.1X] and permission of the chairperson of the major department and the head of the program in adolescence science education.
Prerequisite or corequisite: SEED 7312T [763.04] and 7542T [764.5].
Corequisite: 7543T [764.51].

SEED 7327T Advanced Seminar in Pedagogy and Curriculum Middle Childhood and Adolescence Education: Science
45 hours seminar, plus conference; 3 credits
Expansion of the student's knowledge and skills in science to develop individual approaches to effective teaching in different classroom situations. Improving teaching methods through review of relevant research, reflection on self-as-teacher, analysis of classroom interactions, discourse, and effective teaching and learning environments. Introduction to methods of educational research. Analysis of modes of communication in the classroom. Examination of the specialized discourses of the science disciplines and implications for teaching. Not open to students who have taken EDUC 7327T.

Prerequisite: Initial Certification or SEED 7500X [742X], 7501X [792.1X], 7312T [763.04T], 7542T [764.5T], 7326T [723.04T], and 7543T [764.51T] or equivalents.
Prerequisite or corequisite: SEED 7502T [742.2T].

SEED 7330T Middle Childhood Science Education: Seminar and Student Teaching Practicum I
30 hours seminar, 150 hours or 20 days of supervised student teaching in Middle Childhood Education grades 5-6; 3 credits
Supervised field work in teaching middle childhood science education. Emphasis on the development of an interdisciplinary approach to teaching pre-adolescents from diverse backgrounds, those who are English language learners, and those with special needs. Integration of instructional technology and topics required by New York State standards in Professional certification. Not open to students who have taken EDUC 7330T.

Prerequisite: initial Certification in Early Childhood Education or in a Special Subject or 12 credits in education including SEED 7500X [742X], 7501X [792.1X], 714.25T, 7311T [715.25T] and permission of the Program Head.

SEED 7332T Middle Childhood and Adolescence Science Education: Seminar and Student Teaching Practicum II
30 hours seminar, 150 hours or 20 days of supervised student teaching in Middle Childhood Education grades 7-9; 3 credits
Supervised field work in teaching middle childhood science education. Emphasis on teaching young adolescents from diverse backgrounds, those who are English language learners, and those with special needs. Integration of disciplinary curriculum, instructional technology, and topics required by New York State standards in Professional certification. Not open to all students who have taken EDUC 7332T.

Prerequisite: initial certification or SEED 7500X [742X], 7501X [792.1X] and permission of the Program Head.

SEED 7340T Seminar in Educational Research: Science
45 hours seminar, plus conference; 3 credits
Advanced concepts of educational research compared and contrasted with modes of inquiry in the science disciplines; emphasis on qualitative and quantitative research methods and possible uses of research. Analysis of research relevant to teaching the sciences. Formulation, development, and realization of an original research project relevant to teaching and learning science. Not open to all students who have taken EDUC 7340T.

Prerequisite: Completion of all program conditions and SEED 7502T, 7327T, and 3 credits of an approved elective course or 6 credits in middle childhood education and permission of the head of the program in adolescence science education .

SEED 7380T Methods of Instruction in Adolescence Science Teaching

45 hours seminar plus conference; 3 credits
Methods of instruction and lesson planning, curriculum development and assessment, classroom management, and developing school-community relationships; analysis of New York State science curriculum, and local and national standards in science. Focus on developing self-reflective teaching styles and assessment procedures and research based instruction to address the learning needs of a diverse student population, students with special needs, English language learners; developing, implementing, and evaluating the science curriculum in urban classrooms; backwards design. Attention given to particular needs and interests of students and methods of integrating technology into the classroom. Role of materials and resources applied to teaching science at grade levels appropriate for state certification requirements. Observing, studying, and developing curriculum in light of classroom observations. Field experience of a minimum of 25 hours is required.

SEED 7381T Science Student Teaching Seminar I

22.5 hours seminar plus conference; 1.5 credits
Seminar for administration, guidance, and instruction for the student teaching field experience in science education. Each class meeting will be used to "debrief" and reflect on student teaching experiences, review of State certification requirements, discuss teaching and learning of science in light of student teaching experiences and observations. Students enroll in appropriate NYS certification exams and required workshops. Curriculum development, instructional planning, and multiple research-validated instructional strategies for teaching students within the full range of abilities -- and skill in designing and offering differentiated instruction that enhances the learning of all students in the content area(s) of the certificate. Formal and informal methods of assessing student learning and the means of analyzing one's own teaching practice -- and skill in using information gathered through assessment and analysis to plan or modify instruction, and skill in using various resources to enhance teaching. Distribution and collection of student teaching evaluations and timesheets. Development of portfolios. Students will be engaged in the completion of appropriate NYS certification, workshops and examination requirements.

Prerequisite: SEED 7380
Corequisite: SEED 7542

SEED 7383T Science Student Teaching Seminar II

22.5 hours seminar plus conference; 1.5 credits
Advanced seminar for administration, guidance, and instruction for the student teaching field experience in science education. Each class meeting will be used to "debrief" and reflect on student teaching experiences, review of State certification requirements, discuss teaching and learning of science in light of student teaching experiences and observations. Students enroll in appropriate NYS certification exams and required workshops. Curriculum development, instructional planning, and multiple research-validated instructional strategies for teaching students within the full range of abilities -- and skill in designing and offering differentiated instruction that enhances the learning of all students in the content area(s) of the certificate. Formal and informal methods of assessing student learning and the means of analyzing one's own teaching practice -- and skill in using information gathered through assessment and analysis to plan or modify instruction, and skill in using various resources to enhance teaching. Distribution and collection of student teaching evaluations and timesheets. Students will complete all appropriate NYS certification and examination requirements. Completion of e-portfolios.

Prerequisite: SEED 7380
Corequisite: SEED 7543

SEED 7389T Teaching Literacy in Middle and Secondary Schools

45 hours lecture; 3 credits
Critical examination of contemporary literacy theories. Methods of teaching current innovative practices aligned with the standards in the language arts curriculum and in content areas. Techniques for developing integrated interdisciplinary units. Not open to students who have taken EDUC 7389T.

SEED 7390T Practicum in Meeting the Literacy Needs of Students in Middle Schools

30 hours lecture, 30 hours laboratory; 3 credits
Development, application, and implementation of literacy strategies based on theories and research findings. Supervised practice with selected learners in grades 5 through 8. Not open to students who have taken EDUC 7390T.

SEED 7391T Practicum in Meeting the Literacy Needs of Students in High School

30 hours lecture, 30 hours laboratory; 3 credits
Continuation of SEED 7390T [732.12T] with students in grades 9 through 12. Not open to students who have taken EDUC 7391T.

Prerequisites: SEED 7390T [732.12T] and 7387T [719.12T].

SEED 7401T Middle Childhood Education: Advanced Methodology and and Interdisciplinary Approaches

45 hours plus conference; 3 credits
Continuation of SEED 7400T [712.23T]. Emphasis on teaching and learning involving fractions, decimals, and percents, measurement/geometry, probability, and data interpretation. Interdisciplinary approaches involving mathematics and science, social studies, and literacy. Writing and assessment in mathematics. Diagnostic techniques, and adaptations of materials and methods for special needs learners. Introduction to research paradigms in mathematics education. Not open to students who have taken EDUC 7401T.

Prerequisite: SEED 7400T [712.23T].

SEED 7402T Seminar in Applied Theory and Research in Mathematics Education I

45 hours plus conference; 3 credits
Educational research as applied to the analysis of teaching and learning of mathematics. Qualitative and quantitative research. Use of educational research techniques to analyze teaching and learning of mathematics in urban schools. Mathematics vocabulary, reading, and writing in mathematics. Focus on children with special needs and English-language learners. Nature and design of action research in mathematics education. Selection of a research topic and questions, review of related research. Not open to students who have taken EDUC 7402T.

Prerequisite: SEED 7401T [713.23T].

SEED 7403T Seminar in Applied Theory and Research in Mathematics Education II

45 hours plus conference; 3 credits
Continuation of Education 7402T [701.23T]. Techniques for analyzing qualitative and quantitative data. Design, implementation, and reporting a research project. Current issues in mathematics education. Professional leadership in mathematics education. Not open to all students who have taken EDUC 7403T.

Prerequisite: SEED 7402T [701.23T].

SEED 7451X Teaching Mathematics in Middle Childhood

45 hours plus conference, 20 hours supervised field experience; 3 credits
Objectives, methods, and materials for teaching middle childhood mathematics. Creating classroom and school environments to support the mathematics learning of all students in grades 5-9, including students with special needs and English language learners. Overview of the NCTM Principles and Standards and analysis of the New York State Learning Standards for mathematics in grades K-12. Overview of the 5-9 curriculum strands (number, algebra, probability, and data analysis). Uses of technological tools in the math classroom. Planning lessons according to the New York City 5-9 pacing calendars. Role of problem solving and higher order thinking in mathematics instruction. Workshops in identifying, reporting, and responding to child abuse and substance abuse, fire and arson prevention and safety education. Not open to students who have taken EDUC 7451X.

Corequisite: SEED 7501X [792.1].

SEED 7452X Methods for Teaching Number and Algebra in Grades 5 through 9

45 hours plus conference, 20 hours supervised field experience; 3 credits
Overview of the number and operations 5-9 grades curriculum strand: ways of representing numbers, relationships among numbers, and number systems; meanings of and relationships among operations; fluent mental and written computation and reasonable estimation. Overview of the algebra 5-9 grade curriculum strand: patterns, relations, and functions; representing and analyzing mathematical situations and structures using algebraic symbols; modeling and solving contextualized problems using various representations, such as graphs, tables, and equations; using graphs to analyze the nature of changes in linear relationships. Using graphing calculators. Using diagnostic techniques and differentiating materials and methods for teaching number and operations and algebra. Not open to students who have taken EDUC 7452X.

SEED 7453X Methods for Teaching Geometry and Measurement, Probability and Data Analysis in Grades 5 to 9

45 hours plus conference, 20 hours supervised field experience; 3 credits
Overview of the Geometry and Measurement strands in 5-9 grades: Spatial visualization and geometric modeling; use of transformations and symmetry to analyze mathematical situations; Coordinate geometry. Overview of the Probability and Data Analysis strand in 5-9 grades: Selection and use of appropriate statistical methods to analyze data; Development and use of diagrams as tools for organizing data and solving probability and data analysis problems; Developing and evaluating inferences and predictions based on data. Basic probability concepts for testing conjectures. Effective strategies for guiding interaction in diverse classrooms. Integrating technology in the teaching of geometry, probability, and data analysis. Diagnostic techniques and differentiation of materials and methods for teaching geometry, measurement, probability and data analysis in inclusion and linguistically and culturally diverse classrooms. Not open to students who have taken EDUC 7453X.

SEED 7454T Advanced Topics in Grades 5 to 9 Mathematics Instruction

45 hours plus conference; 3 credits
Advanced topics in the teaching and learning of number, algebra, geometry, probability and data analysis. Teaching mathematics through non-routine problems. Functions of symbols and models. Designing units that interconnect mathematics curriculum strands. Thematic instruction: Planning interdisciplinary projects that link mathematics to literacy, sciences, visual arts, and social studies. Using technological tools in the teaching of algebra, geometry, probability, and data analysis. Techniques for analyzing classroom data. Language and mathematics: Attention to the linguistic demands of math teaching and learning; improving instruction through the analysis of classroom interaction. Using diagnostic techniques and differentiating materials and methods for teaching in inclusion and linguistically and culturally diverse classrooms. Not open to students who have taken EDUC 7454T.

SEED 7455T Seminar in Applied Theory and Research in Middle School Mathematics Education

45 plus conference; 3 credits
Formulation, development, and implementation of an original action research or teaching experiment project that includes review of related research, detailed documentation of the experimental lessons, analysis and interpretation of findings, and reflection on the implications of these for improving classroom practice. Connecting action research results to improving instruction, with particular focus on developing fluency in mathematical language (spoken, written, and diagrammatic) in inclusion and culturally and linguistically diverse classrooms. Current issues, professional development, and leadership in mathematics education. Not open to all students who have taken EDUC 7455T.

SEED 7461T Methods and Content 7-12: Number, Operations, and Algebra

45 hours plus conference, 20 hours field experience; 3 credits
Integration of theory and practice in the teaching and learning of mathematics in grades 7-12. Methods and materials for teaching key topics in number and operations, and algebra. Role of problem solving and higher order thinking skills in mathematics instruction. Focus on the contexts of urban schools, including English Language Learning or special needs students. Assessment techniques. Preparation in literacy and language acquisition as it relates to the teaching of mathematics. Development of critical self-reflection. Not open to students who have taken EDUC 7461T.

SEED 7462T Seminar I in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Mathematics

45 hours, plus conference; 3 credits
Methods of instruction, curriculum development and assessment, with a focus on algebra and geometry. Classroom management and developing school-community relationships. Focus on self-reflective teaching styles and assessment procedures to address the learning needs of a diverse student population, students with special needs, and English language learners. Preparation in literacy and language acquisition as it relates to the teaching of mathematics. Attention given to particular needs and interests of students. Role of materials and resources applied to teaching mathematics at grade levels appropriate for state certification requirements. Not open to students who are enrolled in or have completed Education 7540T [763.32T]. Also not open to students who have taken EDUC 7462T.

SEED 7463T Methods & Content 7-12: Data Analysis, Probability and Trigonometry

45 hours seminar, plus conference; 20 hours field experience; 3 credits
Course concerning theories and methods of teaching mathematics, curriculum development and assessment at grade levels appropriate for New York State certification requirements with a focus on data analysis and probability and trigonometry. Focus on developing reflective practitioners and research based instruction; analysis of New York State Learning Standards in mathematics; teaching mathematics to all students, including students with special needs and English language learners; integrating technology into the classroom; developing,

implementing, and evaluating the mathematics curriculum in urban classrooms. Role of materials and resources applied to teaching mathematics at grade levels appropriate for state certification requirements. Not open to students who have taken EDUC 7463T.

SEED 7464T Seminar in Educational Research: Mathematics
45 hours seminar, plus conference; 3 credits
Advanced concepts of educational research compared and contrasted with modes of inquiry in the discipline; emphasis on qualitative and quantitative research methods and possible uses of research. Analysis of research relevant to teaching mathematics. Formulation, development, and realization of an original research project relevant to teaching and learning mathematics. Not open to all students who have taken EDUC 7464T.

Prerequisite: Completion of all program conditions and SEED 7502T [742.2T], 7544T [722.03T], and 3 credits of an approved elective course.

SEED 7465X Integrating Advanced Digital Technologies in Adolescence Mathematics
30 hours lecture, 30 hours laboratory/conference; 3 credits
Examination of the instructional applications of digital technologies in adolescence mathematics education; consequent new roles for teachers and changes in classroom organization; analysis and evaluation of selected technologies (e.g., dynamic geometry software; graphing calculators; computer algebra systems; spreadsheet; data collection devices; smartboards); embedded awareness for inclusive instruction using assistive technology (AT); and use of technology to differentiate instruction. Designed for teaching mathematics in grades 7-12. Not open to students who have taken EDUC 7465X.

SEED 7470T Seminar II in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Mathematics
45 hours, plus conference; 3 credits
Advanced theories and methods of teaching mathematics at grade levels appropriate for New York State certification requirements; focus on developing reflective practitioners and research based instruction; analysis of New York State Learning Standards in mathematics; teaching mathematics to all students, including students with special needs and English language learners; integrating technology into the classroom; developing, implementing, and evaluating the mathematics curriculum in urban classrooms. Students enroll in workshops in identifying, reporting, and responding to child abuse and in substance abuse, fire and arson prevention and safety education. Not open to students who have taken EDUC 7470X.

Prerequisite: 7462T [763.03T]; 7500X [742X], 7501X [792.1X], 7542T [764.5T] and permission of the chairperson of the major department and the head of the program in middle school mathematics education or adolescence mathematics.
Prerequisite or corequisite: 7462T [763.03T] and 7542T [764.5T].
Corequisite: 7543T [764.51T].

SEED 7472X Issues of Teaching in Middle Childhood

45 hours; 3 credits
Issues in middle childhood teaching. Education for democratic citizenship and intercultural understanding; development and learning of preadolescents and young adolescents; providing for individual differences and special needs; organization of the classroom, school, and curriculum including team teaching, interdisciplinary and integrated curricula; articulation among elementary, middle, and secondary schools; guidance, home-school relations, testing, and assessment. Not open to students who have taken EDUC 7472X.

Prerequisite: permission of the head of the program in middle school mathematics education or adolescence mathematics.

SEED 7500X Perspectives on Education: Teaching Children and Adolescents in Cultural Context
45 hours seminar, plus conference, 20 hours field experience; 3 credits
An introduction to the philosophy, psychology, sociology, culture, and history of educating all children and adolescents. Development of children and adolescents in different cultures within American society in relation to existing value systems, with emphasis on the manner in which biological and psychological factors are interpreted in accordance with prevailing values. Focus on relationship between theory and practice. Opportunities through class discussion, portfolio preparation, and field experience for reflection on oneself as teacher, interactions beween school and community, teachers' roles, and issues of diversity and social justice. Not open to students who have taken EDUC 7500X.

SEED 7501X Analysis of Classroom Interaction and Curriculum
45 hours seminar, 20 hours field work; 3 credits
Improving teaching methods through techniques of self-analysis and analysis of classroom interactions. Analysis of the instructional settings and instructional strategies with focus on students with special needs and English language learners. Analysis of learning processes and modes of communication in the classroom. Examination of the specialized discourses of the subject disciplines in adolescent, middle, and childhood curricula. Analysis of uses of technology in the classroom. Not open to students who have taken EDUC 7501X.

Prerequisite or corequisite: SEED 7500X [742X].

SEED 7502T Diversity and the Inclusive Classroom

45 hours; 3 credits
Examines the relationships between social identities and curriculum, teaching and the institution of school. Focuses on developing inclusive classrooms and addressing the needs of diverse student populations. Examination of curriculum, textbooks, and journals. Consideration of recent work on identity formation, multicultural education, anti-bias education, and institutional processes of labeling students. Development of materials and teaching methods for the inclusive classroom. Not open to students who have taken EDUC 7502T.

SEED 7503X Teaching Writing across the Curriculum

30 hours plus conference; 3 credits
Examination of the writing process as it may be used in subject areas. Study and application of recent research to classroom practice. Analysis of the relationship between writing, critical thinking, and learning and teaching in the subject area. Not open to students who have taken EDUC 7503X.

SEED 7504T Critical Issues in Education: Social Values and Individual Needs: Modern Languages
30 hours lecture, 30 hours laboratory; 3 credits
Systematic study of the teacher's role, focusing on interactions of people and environments in an educational setting. Topics in educational foundations provide concepts for examining teacher and student diversity and teacher role. Exploratory research techniques. Not open to students who have taken EDUC 7504T.

SEED 7505T Critical Issues in Education: Social Values and Individual Needs: Physical Education
30 hours lecture, 30 hours laboratory; 3 credits

Systematic study of the teacher's role, focusing on interactions of people and environments in an educational setting. Topics in educational foundations provide concepts for examining teacher and student diversity and teacher role. Exploratory research techniques. Not open to students who have taken EDUC 7505T.

SEED 7508T Advanced Seminar in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: English
45 hours seminar, plus conference; 3 credits
Expansion of the student's knowledge and skills in English to develop individual approaches to effective teaching in different classroom situations. Improving teaching methods through review of relevant research, reflection on self-as-teacher, analysis of classroom interactions, discourse, and effective teaching and learning environments. Introduction to methods of educational research. Analysis of modes of communication in the classroom. Examination of the specialized discourses of the discipline and implications for teaching. Not open to students who have taken EDUC 7508T.

Prerequisite: Initial Certification or SEED 7500X [742X], 7501X [792.1X], 7531T [763.01T], 7542T [764.5T], 7514T [723.01T], and 7543T [764.51T] or equivalents.
Prerequisite or corequisite: SEED 7502T [742.2T].

SEED 7509T Advanced Seminar in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Social Studies
45 hours seminar, plus conference; 3 credits
Expansion of the student's knowledge and skills in social studies to develop individual approaches to effective teaching in different classroom situations. Improving teaching methods through review of relevant research, reflection on self-as-teacher, analysis of classroom interactions, discourse, and effective teaching and learning environments. Introduction to methods of educational research. Analysis of modes of communication in the classroom. Examination of the specialized discourses of the discipline and implications for teaching. Not open to students who have taken EDUC 7509T.

Prerequisite: Initial Certification or SEED 7500X [742X], 7501X [792.1X], 7532T [763.02T], 7542T [764.5T], 7515T [723.02T], and 7543T [764.51T] or equivalents.
Prerequisite or corequisite: SEED 7502T [742.2X].

SEED 7510T Advanced Seminar in Pedagogy and Curriculum Middle Childhood and Adolescence Education: Modern Languages
45 hours seminar, plus conference; 3 credits
Expansion of the student's knowledge and skills in the language to develop individual approaches to effective teaching in different classroom situations. Improving teaching methods through review of relevant research, reflection on self-as-teacher, analysis of classroom interactions, discourse, and effective teaching and learning environments. Introduction to methods of educational research. Analysis of modes of communication in the classroom. Examination of the specialized discourses of the language and implications for teaching. Not open to students who have taken EDUC 7510T.

Prerequisite: Initial Certification or SEED 7500X [742X], 7501X [792.1X], 7534T [763.11T], 7542T [764.5T], 7516T [723.11T], and 7543T [764.51T] or equivalents.
Prerequisite or corequisite: SEED 7502T [742.2T].

SEED 7511T Advanced Seminar in Pedagogy and Curriculum Middle Childhood and Adolescence Education: Physical Education
45 hours seminar, plus conference; 3 credits
Expansion of the student's knowledge and skills in physical education to develop individual approaches to effective teaching in different classroom situations. Improving teaching methods through review of relevant research, reflection on self-as-teacher, analysis of classroom interactions, discourse, and effective teaching and learning environments. Introduction to methods of educational research. Analysis of modes of communication in the classroom. Examination of the specialized discourses of the discipline and implications for teaching. Not open to students who have taken EDUC 7511T.

Prerequisite: Initial Certification or SEED 7500X [742X], 7501X [792.1X], 7535T [763.13T], 7542T [764.5T], 7517T [723.13T], and 7543T [764.51T] or equivalents.
Prerequisite or corequisite: SEED 7502T [742.2T]

SEED 7512T Advanced Seminar in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Health and Nutrition Sciences
45 hours seminar, plus conference; 3 credits
Expansion of the student's knowledge and skills in health and nutrition sciences to develop individual approaches to effective teaching in different classroom situations. Improving teaching methods through review of relevant research, reflection on self-as-teacher, analysis of classroom interactions, discourse, and effective teaching and learning environments. Introduction to methods of educational research. Analysis of modes of communication in the classroom. Examination of the specialized discourses of the discipline and implications for teaching.

Prerequisite: Initial Certification or Education 7500X [742X], 7501X [792.1X], 7536T [763.16T], 7542T [764.5T], 7518T [723.16T], and 7543T [764.51T] or equivalents.
Prerequisite or corequisite: Education 7502T [742.2T].

SEED 7514T Seminar II in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: English
45 hours, plus conference; 3 credits
Advanced theories and methods of teaching English at grade levels appropriate for New York State certification requirements; focus on developing reflective practitioners and research based instruction; analysis of New York State Learning Standards in English; teaching English to all students, including students with special needs and English language learners; integrating technology into the classroom; developing, implementing, and evaluating the English curriculum in urban classrooms. Students enroll in workshops in identifying, reporting, and responding to child abuse and in substance abuse, fire and arson prevention and safety education. Not open to students who have taken EDUC 7514T.

Prerequisite: SEED 7500X [742X], 7501X [792.1X] and permission of the head of the program in English education..
Prerequisite or corequisite: SEED 7531T [763.01T] and 7542T [764.5T].
Corequisite: 7543T [764.51T].

SEED 7515T Seminar II in Pedagogy and Curriculum: Social Studies
45 hours plus conference; 3 credits
Advanced theories and methods of teaching social studies at grade levels appropriate for New York State certification requirements; focus on developing reflective practitioners and research based instruction; analysis of New York State Learning Standards in social studies; teaching social studies to all students, including students with special needs and English language learners; integrating technology into the classroom; developing, implementing, and evaluating the social studies curriculum in urban classrooms. Students enroll in workshops in identifying, reporting, and responding to child abuse and in substance abuse, fire and arson prevention and safety education. Not open to students who have taken EDUC 7515T.

Prerequisite: 7500X [742X], 7501X [792.1X] and permission of the program head of social studies.
Prerequisite or corequisite: SEED 7532T [763.02T] and 7542T [764.5T].
Corequisite: SEED 7543T [764.51T].

SEED 7516T Seminar II in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Modern Language
45 hours, plus conference; 3 credits
Advanced theories and methods of teaching modern languages at grade levels appropriate for New York State certification requirements; focus on developing reflective practitioners and research based instruction; analysis of New York State Learning Standards in modern languages; teaching modern languages to all students, including students with special needs and English language learners; integrating technology into the classroom; developing, implementing, and evaluating the modern language curriculum in urban classrooms. Students enroll in workshops in identifying, reporting, and responding to child abuse and in substance abuse, fire and arson prevention and safety education. Not open to students who have taken EDUC 7516T.

Prerequisite: SEED 7500X [742X], 7501X [792.1X] and permission of the chairperson of the major department and the chairperson or deputy of the Department of Secondary Education.
Prerequisite or corequisite: SEED 7534T [763.11T] and 7542T [764.5T].
Corequisite: SEED 7543T [764.51T].

SEED 7517T Seminar II in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Physical Education
45 hours, plus conference; 2 credits
Advanced theories and methods of teaching physical education at grade levels appropriate for New York State certification requirements; focus on developing reflective practitioners and research based instruction; analysis of New York State Learning Standards in physical education; teaching physical education to all students, including students with special needs and English language learners; integrating technology into the classroom; developing, implementing, and evaluating the physical education curriculum in urban classrooms. Students enroll in workshops in identifying, Education 95 reporting, and responding to child abuse and in substance abuse, fire and arson prevention and safety education. Not open to all students who have taken EDUC 7517T.

Prerequisite: SEED 7500X [742X], 7501X [792.1X], and permission of the chairperson of the major department and the chairperson or deputy of the Department of Secondary Education.
Prerequisite: SEED 7535T [763.13T] and 7542T [764.5T].
Corequisite: SEED 7543T [764.51T].

SEED 7521T Seminar in Educational Research: English

45 hours seminar, plus conference; 3 credits
Advanced concepts of educational research compared and contrasted with modes of inquiry in the discipline; emphasis on qualitative and quantitative research methods and possible uses of research. Analysis of research relevant to teaching English. Formulation, development, and realization of an original research project relevant to teaching and learning English. Not open to students who have taken EDUC 7521T.

Prerequisite: Completion of all program conditions and SEED 7502T [742.2T], 7508T [722.01T], and 3 credits of an approved elective course.

SEED 7522T Seminar in Educational Research: Social Studies

45 hours seminar, plus conference; 3 credits
Advanced concepts of educational research compared and contrasted with modes of inquiry in the discipline; emphasis on qualitative and quantitative research methods and possible uses of research. Analysis of research relevant to teaching social studies. Formulation, development, and realization of an original research project relevant to teaching and learning social studies. Not open to students who have taken EDUC 7522T.

Prerequisite: Completion of all program conditions and SEED 7502T [742.2T], 7509T [722.02T], and 3 credits of an approved elective course.

SEED 7523T Seminar in Educational Research: Modern Languages
45 hours seminar, plus conference; 3 credits
Advanced concepts of educational research compared and contrasted with modes of inquiry in the discipline; emphasis on qualitative and quantitative research methods and possible uses of research. Analysis of research relevant to teaching modern languages. Formulation, development, and realization of an original research project relevant to teaching and learning modern languages. Not open to all students who have taken EDUC 7523T.

Prerequisite: Completion of all program conditions and SEED 7502T [742.2T], 7510T [722.11T], and 3 credits of an approved elective course.

SEED 7524T Seminar in Educational Research: Physical Education
45 hours seminar, plus conference; 3 credits
Advanced concepts of educational research compared and contrasted with modes of inquiry in the discipline; emphasis on qualitative and quantitative research methods and possible uses of research. Analysis of research relevant to teaching physical education. Formulation, development, and realization of an original research project relevant to teaching and learning physical education. Not open to students who have taken EDUC 7524T.

Prerequisite: Completion of all program conditions and SEED 7502T [742.2T], 7511T [722.13T], and 3 credits of an approved elective course.

SEED 7525T Seminar in Educational Research: Health and Nutrition Sciences
45 hours seminar, plus conference; 3 credits
Advanced concepts of educational research compared and contrasted with modes of inquiry in the discipline; emphasis on qualitative and quantitative research methods and possible uses of research. Analysis of research relevant to teaching health and nutrition sciences. Formulation, development, and realization of an original research project relevant to teaching and learning health and nutrition sciences.

Prerequisite: Completion of all program conditions Education 7502T [742.2T], 7512T [722.16T], and 3 credits of an approved elective course.

SEED 7527T Education and Ethics

30 hours plus conference; 3 credits
Ethical problems in locating and justifying educational values; in determining the nature, source, and limits of the school's moral authority; and in influencing the child's sense of values, moral outlook, and ways of judging. Exploration of the ethics of teaching. Use of literature, drama, the visual arts, and theories of ethics and moral development to explore the ethics of teaching, character education, and moral education. Not open to students who have taken EDUC 7527T.

SEED 7528T Critical Issues in Education: Social Values and Individual Needs: English
30 hours lecture, 30 hours laboratory; 3 credits
Systematic study of the teacher's role, focusing on interactions of people and environments in an educational setting. Topics in educational foundations provide concepts for examining teacher and student diversity and teacher role. Exploratory research techniques. Not open to all students who have taken EDUC 7528T.

SEED 7529T Critical Issues in Education: Social Values and Individual Needs: Mathematics
30 hours lecture, 30 hours laboratory; 3 credits
Systematic study of the teacher's role, focusing on interactions of people and environments in an educational setting. Topics in educational foundations provide concepts for examining teacher and student diversity and teacher role. Exploratory research techniques. Not open to students who have taken EDUC 7529T.

SEED 7531T Seminar I in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: English
45 hours, plus conference; 3 credits
Seminar concerning problems and issues in the organization of subject matter. Introduction to methods of instruction, curriculum development and assessment, classroom management, and developing school-community relationships. Focus on self-reflective teaching styles and assessment procedures to address the learning needs of a diverse student population, students with special needs, and English language learners. Preparation in literacy and language acquisition. Attention given to particular needs and interests of students and methods of integrating technology into the classroom. Role of materials and resources applied to teaching English at grade levels appropriate for state certification requirements. Not open to students who are enrolled in or have completed SEED 7540T [763.32T] or EDUC 7531T.

Corequisite: SEED 7542T [764.5T]

SEED 7532T Seminar I in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Social Studies
45 hours, plus conference; 3 credits
Seminar concerning problems and issues in the organization of subject matter. Introduction to methods of instruction, curriculum development and assessment, classroom management, and developing school-community relationships. Focus on self-reflective teaching styles and assessment procedures to address the learning needs of a diverse student population, students with special needs, and English language learners. Preparation in literacy and language acquisition. Attention given to particular needs and interests of students and methods of integrating technology into the classroom. Role of materials and resources applied to teaching social studies at grade levels appropriate for state certification requirements. Not open to students who are enrolled in or have completed SEED 7540T [763.32T] or EDUC 7532T.

Corequisite: SEED 7542T [764.5T].

SEED 7534T Seminar I in Pedagogy and Curriculum, Middle Childhood and Adolescence Educion: Modern Languages
45 hours, plus conference; 3 credits
Seminar concerning problems and issues in the organization of subject matter. Introduction to methods of instruction, curriculum development and assessment, classroom management, and developing school-community relationships. Focus on self-reflective teaching styles and assessment procedures to address the learning needs of a diverse student population, students with special needs, and English language learners. Preparation in literacy and language acquisition. Attention given to particular needs and interests of students and methods of integrating technology into the classroom. Role of materials and resources applied to teaching modern languages at grade levels appropriate for state certification requirements. Not open to students who are enrolled in or have completed SEED 7540T [763.32T] or EDUC 7534T.

Corequisite: SEED 7542T [764.5T].

SEED 7535T Seminar I in Pedagogy and Curriculum, Middle Childhood and Adolescence Education: Physical Education
45 hours, plus conference; 3 credits
Seminar concerning problems and issues in the organization of subject matter. Introduction to methods of instruction, curriculum development and assessment, classroom management, and developing school-community relationships. Focus on self-reflective teaching styles and assessment procedures to address the learning needs of a diverse student population, students with special needs, and English language learners. Preparation in literacy and language acquisition. Attention given to particular needs and interests of students and methods of integrating technology into the classroom. Role of materials and resources applied to teaching physical education at grade levels appropriate for state certification requirements. Not open to students who are enrolled in or have completed SEED 7540T [763.32T] or EDUC 7535T.

Corequisite: SEED 7542T [764.5T].

SEED 7538T Student Teaching of Mathematics: Seminar and Practicum I
15 hours plus 20 days or 150 hours of weekly supervised student teaching; 30 hours field observation; 3 credits
Course in student practice teaching with seminar hours to prepare for State mandated portfolio of student teaching. Opportunity for extensive and intensive participation in teaching and school activities at the middle childhood and adolescence levels. Student teaching hours to be arranged. Observing, developing, and studying curriculum in light of teaching experiences and observations.

Prerequisite: SEED 7500X, SEED 7501X, and permission of the appropriate program head and the chair of the major department.

SEED 7539T Student Teaching of Mathematics: Seminar and Practicum II
15 hours plus 20 days or 150 hours of weekly supervised student teaching; 30 hours field observation; 3 credits
Course in student practice teaching with seminar hours to prepare for State mandated portfolio of student teaching. Opportunity for extensive and intensive participation in teaching and school activities at the middle childhood and adolescence levels. Student teaching hours to be arranged. Observing, developing, and studying curriculum in light of teaching experiences and observations.

Prerequisite: SEED 7500X, SEED 7501X, and permission of the appropriate program head and the chair of the major department.

SEED 7540T Workshop in Secondary Education: Integrated/interdisciplinary curriculum
45 hours; 3 credits
Workshop concerning problems and issues in the organization of subject matter. Techniques of instruction, classroom management, pupil adjustment, school-community relationships. Attention is given to the particular needs and interests of students, with provision for individual and group study. Not open to students who have taken EDUC 7540T.

SEED 7542T Student Teaching Practicum I

150 hours or twenty days of weekly supervised student teaching; 30 hours field observation; 2 credits
Course in student practice teaching. Opportunity for extensive and intensive participation in teaching and school activities. Hours to be arranged. Observing, developing, and studying curriculum in light of teaching experiences and observations.

Prerequisite: SEED 7500X [742X], SEED 7501X, and permission of the appropriate program head and the chair of the major department.
Corequisite: SEED 7531T [763.01T] or 7532T [763.02T] or 7462T [763.03T] or 7312T [763.04T] or 7534T [763.11T] or 7535T [763.13T].

SEED 7543T Student Teaching Practicum II

150 hours or 20 days of weekly supervised teaching, 30 hours of field experience; 2 credits
Advanced course in student practice teaching. Opportunity for more extensive and intensive participation in teaching and school activities. Hours to be arranged. Daily supervised student teaching in grades and subject areas appropriate for New York State certification requirements. Observing, developing, and studying curriculum in light of teaching experiences and observations.

Prerequisite: SEED 7500X, SEED 7501X and permission of the appropriate program head and the chairperson of the major department.
Prerequisite or corequisite: SEED 7531T or 7532T or 7462T or 7312T or 7534T.
or 7535T or 7536T and 7542T.
Corequisite: SEED 7514T or 7515T or 7470T or 7326T or 7516T or 7517T.

SEED 7544T Advanced Seminar in Pedagogy and Curriculum Middle Childhood and Adolescence Education: Mathematics

45 hours seminar, plus conference; 3 credits
Expansion of the student's knowledge and skills in mathematics to develop individual approaches to effective teaching in different classroom situations. Improving teaching methods through review of relevant research, reflection on self-as-teacher, analysis of classroom interactions, discourse, and effective teaching and learning environments. Introduction to methods of educational research. Analysis of modes of communication in the classroom. Examination of the specialized discourses of the discipline and implications for teaching.

Prerequisite: Initial Certification or SEED 7500X, 7501X, 7462T, 7542T, 7470T, and 7543T or equivalents.
Prerequisite or corequisite: SEED 7502T.

SEED 7545X Integrating Technology and Media in Adolescence Education

30 hours lecture, 30 hours laboratory; 3 credits
Examination of the instructional applications of technology and media in Adolescence Education; consequent new roles for teachers and changes in classroom organization; computer literacy; analysis and evaluation of selected technologies and media designed for teaching various subject areas in grades 7-12. Not open to students who have completed SEED 7215X [784.1X] or EDUC 7545X.

SEED 7546T Critical Issues in Education: Social Values and Individual Needs: Social Studies

30 hours lecture, 30 hours laboratory; 3 credits
Systematic study of the teacher's role, focusing on interactions of people and environments in an educational setting. Topics in educational foundations provide concepts for examining teacher and student diversity and teacher role. Exploratory research techniques. Not open to students who have taken EDUC 7546T

SEED 7547T Critical Issues in Education: Social Values and Individual Needs: Science

30 hours lecture, 30 hours laboratory; 3 credits
Systematic study of the teacher's role, focusing on interactions of people and environments in an educational setting. Topics in educational foundations provide concepts for examining teacher and student diversity and teacher role. Exploratory research techniques. Not open to students who have taken EDUC 7547T.

SEED 7548X Advanced Theories and Practice of Composition

30 hours plus conference; 3 credits
Theory and practice of teaching writing at the secondary level (grades 7-12), and such related issues as revision, evaluation, and teaching writing to English language learners. (This course is the same as English 7507X [779X].) Not open to students who have taken EDUC 7548X.

SEED 7549X Theater in the Classroom

30 hours plus field experience; 3 credits
Theater work in classroom settings. Existing models of theater arts in education. Using theater, improvisation and creative drama to explore specialized subject areas and pedagogy. Practical studio work. The classroom as theater. Collaboration of education and theater students on theater in education projects, including workshops in focus schools. Mainstage and outside productions. Visits to area public schools. Creation of age-appropriate theater study guides. (This course is the same as Theater 7141X [741X].) Not open to students who have taken EDUC 7549X

Prerequisite: Permission of the instructor and the chairperson or deputy of the Department of Secondary Education.

SEED 7584X Teaching Concepts of Geography in Middle and High School

45 hours; 3 credits
Concepts of contemporary geography, survey of key current global issues and examination of several of the world's major geographic realms; issues of globalization as well as particular details of critical regions: South America, East Asia, South Asia, Europe, North America, North and Southern Africa. Investigation and development of curriculum and instructional plans to support the teaching of geography to students in grades 7-12.

Prerequisite or Corequisite: SEED 7500X, 7501X

SEED 7671X Children and Youth with Special Needs

45 hours; 3 credits
Characteristics of diverse student populations with a focus on English language learners and students with special needs, including the gifted. Clinical practice in the classroom environment regarding assessment, curriculum, management, integrations and positive supports, and interventions for English language learners and students with special needs, including the gifted, in general education settings. Review of regulatory compliance. Focus on collaboration with other professionals including co-teaching, consultative and itinerant models. Engagement of family members in collaborative efforts. Clinical experiences (20 hours) in special education and/or inclusive classrooms required.

Sociology

Department office: 3612 James Hall
Phone: 718.951.5314

Full-time Faculty

Professors: Gould, Lewis, Shortell, Zukin
Associate Professors: Bank Munoz, Braine, Brown, Porter, Smithsimon, Vitale
Assistant Professors: Fox, Johnson, Manohar, Molina, Pan

With its study of social life, social change, and the social causes and consequences of human behavior, sociology is remarkably dynamic and extraordinarily broad. The sociology curriculum strongly emphasizes social theory and methods and will help you to understand the workings of societies, their institutions, organizations and groups by exposing you to the history, knowledge, theory and methods of the discipline. Faculty teaching in the program are active researchers. Our curriculum emphasizes not only formal knowledge of methods of data collection and tools of data analysis but also practical judgment in research settings, including archives and in the field.

Electives include race and ethnicity, work and labor, globalization, social class, immigration, and criminology. By introducing you to the concepts, theoretical frameworks, and methodological techniques of sociology, we will help you develop a "sociological imagination," leading to a deeper understanding of the relationships between personal experience (your own and that of others) and the larger social world. In all of your sociology courses you will be asked to examine and query a "world taken for granted."

Graduates are well prepared for various careers. Many of our students are currently employed and are pursuing a degree that will help them advance their present careers. Some of our students go on to sociology Ph.D. programs, while others pursue jobs in government service or with community based non-profits.

M.A. degree program in sociology
HEGIS code 2208; SED program code 02110

This master of arts program is designed to help students advance their skills in the theories and methods used by sociologists as well as provide in-depth study in a variety of elective areas such as criminology, gender, class stratification, and urban sociology. Our students have access to a variety of support services including our computer lab, sociology lounge, and seminar room. All of our classes emphasize critical thinking and writing skills. Most courses have a seminar format with extensive interaction between students and faculty. All classes are offered in the evening to accommodate work schedules.

Many of our graduates are interested in going on to doctoral programs in sociology and we work with them to try to accomplish their goal. Others are currently employed and are pursuing a degree that will help them advance their present careers or move into new careers in government, social services, or community organizations.

Matriculation requirements

Applicants must offer at least 12 credits in advanced courses in sociology or a related social science, including a B+ or better in courses in social theory and methods of research, a writing sample, a personal statement, and two letters of recommendation. Graduate Record Examination (GRE) scores are encouraged.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty-one to 32 credits are required for the degree. Students must complete 24 credits in the Sociology Department. The following courses are required: Sociology 7101X, 7102X, 7111X, 7112G, and 7113G, each with a grade of B or higher in order to remain matriculated in the program.

Students who have completed a course in statistics or pass an examination in statistics may be exempt from Sociology 7112G with permission of the graduate deputy chairperson.

A thesis is required. The topic must be approved by a faculty advisor and the graduate deputy chairperson. Students must register for 7601G and then if necessary 7602G while completing the thesis.

Courses in the Sociology Department offered towards the degree must be 7000-level courses or higher.

The program of study must be approved by the deputy chairperson.

CUNY Ph.D.

The City University of New York offers a doctoral program in sociology. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Sociology Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Sociology Department and the executive officer of the doctoral program.

Courses

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

SOCY 6101X Minority Groups

30 hours plus conference; 3 credits
Immigration movements to the United States. Refugees and policies regarding refugees. Cultural heterogeneity and emergence of new cultural syntheses. Ethnic and racial structure of the American people. Problems of adjustment and assimilation. Methods of solving intergroup tension and antagonism. (Not open to students who have completed Sociology 713X.)

Prerequisite: an introductory course in sociology.

SOCY 6102X Sociology of Urban Communities

30 hours plus conference; 3 credits
Institutional and interpersonal concomitants of city life. Ancient and modern history of urban development. Major works and theorists. (Not open to students who have completed Sociology 7323X [724X].)

Prerequisite: an introductory course in sociology.

SOCY 6103X Deviance and Social Problems

30 hours plus conference; 3 credits
Relationships between deviant behavior and social definitions of deviance. How definitions of deviance emerge when social problems are attributed to certain categories of people. Types of deviance include mental illness, physical disability, sexual deviations, alcoholism, drug addiction, retardation.

Prerequisite: an introductory course in sociology.

SOCY 7101X Development of Sociological Theory

3 hours; 3 credits
Critical examination of major treatises and schools in the development of sociological theory from Comte to twentieth-century theorists.

SOCY 7102X Contemporary Sociological Theory

3 hours; 3 credits
Critical discussion of current sociological theory. Relation of contemporary theory to empirical research.

SOCY 7111X Qualitative Methods of Sociological Research

3 hours; 3 credits
Qualitative concepts and methods of sociological research; their application in representative published studies.

SOCY 7112G Introductory Statistics

3 hours; 3 credits
Descriptive and inferential statistics appropriate for analysis of sociological data. Emphasis on concepts and implications of sociological statistics rather than on mathematical foundations. Critical survey of statistical reasoning in major sociological studies.

SOCY 7113G Advanced Statistics

3 hours; 3 Credits
Analysis of categorical data. Loglinear models for contingency tables. Logistic regression models. Aspects of multivariate analysis, multivariate normal distribution, MANOVA. Analysis of covariance, principal components, factor analysis. Classification and grouping techniques, discriminant function analysis, multidimensional scaling. Statistical computing.

Sociology 7112G [712G], or permission of the chairperson.

SOCY 7201X Survey Research Methods

3 hours; 3 credits
Quantitative concepts and methods, including computer and other techniques used in large-scale surveys. Application of such concepts and methods to problems in social research.

SOCY 7202X Social Networks

3 hours; 3 Credits
Theory and method of social network analysis. Sociograms and other graphical techniques. Logit (p*) models. Quantitative measures of network structure. Blockmodels and structural equivalence. Kin, friendship, community networks. Social capital and trust. Social influence networks. Organizations and structural networks. "Small world" dynamics.

SOCY 7203X Who Counts? Population Trends, Power, Social Problems

3 hours; 3 credits
How population enumeration relates to social power and collective identity. Race, ethnicity, language, sexual behavior, and poverty trends as social problems. Visibility and social conflict. Politics and social history of U.S. Census. Applied demographic analysis and place-based research.

SOCY 7314X Advanced Criminology

3 hour; 3 credits
Major sociological and cultural forces that lead to crime. Criminal behavior viewed as separable behavioral systems and as adaptations to variations in cultural standards and the social structure.

SOCY 7321X Dynamics of Modernity and Globalization

3 hours; 3 credits
History, sociology, and ideas that led to the formation, structures, and processes of modern societies. Critical frameworks of understanding processes of social change and the role of social actors, institutions and

structures as dynamic aspects of modernization and modernity. Local, regional, national, and global impacts of processes of modernity such as industrialization, modern national state-formation, dependency, globalization, economic fragmentation and emerging cultural identities. Future and prospects of modernity.

SOCY 7322X Sociology of Power

3 hours; 3 credits
Central problems of concern to sociologists studying the ability of individuals and groups to influence and/or control the behavior of others even against their will. Ways in which individuals and groups translate preferences into social organization. Focus on the institutionalization of power in states and economic structures. Competing sociological models and theories of power. Concepts of legitimacy and authority. The nature of power, inside of and outside of politics and governance. The dynamics of political and social change. Focus on the intersection of power and social class, gender and race.

SOCY 7323X Sociology of Work and Labor

3 hours; 3 credits
Major theoretical debates in the fields of work and labor. Discussion of both the historical and contemporary nature of work. Shifts in the labor market. Race, gender, immigration and work. Industrialization and the rise of unions. Unions and workplace organizations as a model of social change.

SOCY 7341X Race and Ethnicity

3 hours; 3 Credits
Overview of theories on race and ethnicity. Focus on urban environment. Relationship between different racial and ethnic groups. Development of racism and capitalism. Research paper required.

SOCY 7342X Immigrants in New York City

3 hours; 3 credits
Immigration and immigrants in New York City in both historical and contemporary context. Major sociological perspectives on immigration. The immigrant experience in New York City. Immigrant organization and mobilization in New York City.

SOCY 7343X Social Class

3 hours; 3 credits
Various class, estate, caste systems. Their influences on behavior and values. Their relation to political power, social prestige, consumption style. Social mobility.

SOCY 7344X Sociology of Gender

3 hours; 3 credits
Exploration of the social construction of gender as a major social category and its production and maintenance as a master social status. Issues that will be explored are: gender and parenting; social scripting of sexuality; micropolitics of gender; gender, production, and power in nonindustrialized societies; gender and class in industrialized societies; occupational gender segregation in post-industrial societies; gender, class, and racial oppression in the United States; theories and strategies of feminism.

SOCY 7351X Sociology of Socialization

3 hours; 3 credits
Social interactive processes that shape the individual's identification and participation in society. Social learning of culturally preferred and variant values, norms, role identifications and behaviors. Internalization and reinforcement by cumulative participation in role relationship systems of family, friends, school, religion, work. Dynamic interplay between primary and later socialization. Conflict and consensus among varying socialization sources. Functioning in social stability and social change including conditions of drastic resocialization.

SOCY 7352X Social Conflict

3 hours; 3 credits
Major social bases of conflict: class, status, racial, generational. Means of conflict: nonviolent resistance, rioting, vigilantism, terrorism, guerilla warfare, revolution. Factors contributing to escalation and de-escalation of conflict. Termination and consequences of social conflict. Focus on theories of social conflict advanced by Marx, Simmel, Coser, Dahrendorf, others. Conflict in contemporary United States.

SOCY 7361X The Sociology of the Family

3 hours; 3 credits
Analysis of interpersonal relationships and institutions in private life; their evolution under the influence of modernization, urbanization, technological change, secularization, and modern legal theory; their impact on social identity, child rearing, education, and social organization.

SOCY 7362X The Sociology of Aging

3 hours; 3 credits
Changing demography of aging and emergence of the "new old." Comparison with the emergence of childhood and adolescence in earlier phases of Western history. Problem of adjusting theory and research to the rapidly changing character of older populations. Alternative perspectives on the study of aging. Continuity and discontinuity over the life cycle. Aging, social change, and social isolation. Contrasting views on the prospects of an "age irrelevant" society.

SOCY 7370X Environmental Sociology

3 hours; 3 credits
Dynamic interactions between social systems and ecosystems; incorporating the natural environment as a variable in sociological analysis; social origins of major environmental stresses; social conflicts produced by environmental; approaches to resolving social system-ecosystem disjuncture; major theoretical frameworks and debates in the sub-discipline; roles of science and technology in generating and responding to socio-environmental disorganization; role of socio-economic inequality in environmental conflicts; emergence of environmental social movement coalitions; linkages between economic processes and sustainable development trajectories.

SOCY 7401X Seminar in Sociology

3 hours; 3 credits
Lecture, reading, reports on selected topics in advanced sociology. Content of the course varies and is determined by students and instructor.

SOCY 7402X Research Seminar in Sociological Theory

3 hours; 3 credits

SOCY 7403X Research Seminar in the Urban Community

3 hours; 3 credits

SOCY 7501X Independent Reading

Minimum of 135 hours of independent work and conference; 3 credits
Critical study, in an area of sociology selected by the student, of reading approved by a faculty adviser. One or more written reports or a final examination.

Prerequisite: matriculation in the sociology program and permission of the deputy chairperson.

SOCY 7601G Thesis Preparation

15 hours, plus conference; 1 credit each term
Research supervised by a faculty member for the thesis. The work must be awarded a grade of B or higher in order to be eligible for consideration toward the completion of the master of arts degree in sociology. Students register for each of these courses only once.

Prerequisite: 21 credits in sociology and permission of the deputy chairperson.

SOCY 7602G Thesis Preparation

15 hours plus conference; 1 credit each term
Research supervised by a faculty member for the thesis. The work must be awarded a grade of B or higher in order to be eligible for consideration toward the completion of the master of arts degree in sociology. Students register for each of these courses only once.

Prerequisite: 21 credits in sociology and permission of the deputy chairperson.

The following inactive course(s) will only be offered if there is sufficient demand:

SOCY 7396X Sociology of Medicine

Speech Communication Arts and Sciences

Department office: 3439 Boylan Hall
Phone: 718.951.5225

Full-time Faculty

Presidential Professor: Silman
Professors: Emmer, Geller, Haas, Levy, Lu, Marton, Rubinstein, Silman
Associate Professors: Longtin, Schaeffer, Thompson
Assistant Professors: Beaumont-Bowman, Epstein, Fuse, Neave-DiToro
Instructor: Hazamy
Lecturer: Sass-Brown

The Department of Speech Communication Arts and Sciences has both a distinguished faculty and cutting-edge resources that provide students with a comprehensive range of studies in all aspects of human communication and related pathologies. With a combination of coursework, research, and clinical practicum, students gain a thorough grounding in the mechanics of speech and language, and learn to recognize, diagnose and treat communication disorders in adults and children, including those related to voice, language, learning disabilities, aphasia, swallowing fluency, and speech sound production. Graduates of our program go on to careers in both the public and private sectors. Additional information regarding student outcomes can be found here: http://www.brooklyn.cuny.edu/web/academics/schools/socialsciences/graduate/speech_sciences/information/pathology.php

M.A. degree program in speech
HEGIS code 1506; SED program code 81376

The master of arts degree in speech is being redesigned and the program is not currently accepting applications.

Public communication.

Matriculation requirements

Applicants must offer at least 18 credits in courses in speech including courses in argumentation and discussion.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty credits and a thesis or two terms of Speech 7821X are required for the degree.

Eighteen to 24 credits must be completed in courses in the Speech Department. The following courses are required of all students: Speech 702X, 7807X, 753X, 7802X, 7803X, and 7804X. Students who choose to write a thesis must also take Speech 7822G. Students who do not choose to write a thesis must also take two terms of Speech 7821X.

The remaining 12 credits required for the degree may be chosen from other departments with the approval of the department chairperson.

Students must pass a written comprehensive examination. Information about requirements for the comprehensive examination and thesis is in the section "Academic Regulations and Procedures."

Courses in the Speech Department offered toward the degree must be 7000-level courses.

The program of study must be approved by the department chairperson.

M.S. degree program in speech - language pathology
HEGIS code 1220; SED program code 77738

This master of science degree program prepares students for careers as speech-language pathologists in community speech, language, and hearing centers, hospitals, school settings, rehabilitative agencies, and private practice. Academic, clinical, and research opportunities covering the range of disorders that occur throughout the lifespan are provided in state-of-the-art classrooms, clinical suites, and laboratories.

For additional program details please visit,
http://www.brooklyn.cuny.edu/web/academics/schools/socialsciences/graduate/speech_sciences/information/pathology.php

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Matriculation requirements

Applicants must offer at least 24 credits in speech-language pathology and audiology with grade point average of 3.00 or higher. The credits must include courses as follows: acoustics of speech and hearing, anatomy and physiology of the speech and hearing mechanism, speech and language acquisition, audiology, treatment of speech and language disorders, phonetics, speech and language disorders, and statistics.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

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54 to 66 credits are required for the degree.

Students must pass a written departmental comprehensive examination and must take and report their scores on the Praxis Examination in Speech-Language Pathology.

Information about requirements for the comprehensive examination is in the section "Academic Regulations and Procedures."

Courses in the Department of Speech Communication Arts and Sciences offered toward the degree must be 7000-level courses.

The program of study must be approved by an adviser in the student's major area of concentration.

Students must also complete requirements in speech-language pathology, as follows:

Speech 7107X, 7211X, 7323X, 7325X, 7326X, 7327X, 7321X, 7128X, 7313X, 7336X, 7337X, 7333X, and U7441X; and not more than 6 credits in clinical practicum, for a minimum of 400 clock hours. A maximum of 9 credits in courses in clinical practicum (7391X, 7392X, 7393X, 7691X), special problems (7296X), and courses taken on a tutorial basis may be counted toward the degree. The remaining credits required for the degree must be chosen in consultation with an adviser in the major area of concentration.

Courses in speech and hearing science may be incorporated on an elective basis.

Certification of clinical competency

Only students who complete the degree requirements, including the Praxis Examination in Speech-Language Pathology, are eligible for certification of clinical competency by the American Speech-Language-Hearing Association.

Those students who intend to apply for New York State teacher certification as teachers of students with speech and language disabilities must present course work as described in option (b) or (c) of the matriculation requirements for the M.S. in education, teacher of students with speech and language disabilities, or must complete an additional 3 graduate credits in the School of Education as follows: Secondary Education 7500X. Additionally, those students must complete Speech 7551X and Childhood Education 7672T and 7677T. In order to be eligible for teacher certification, students must also pass exams and complete workshops as stipulated by the New York State Department of Education.

CUNY Ph.D.

The City University of New York offers a doctoral program in speech and hearing sciences. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Speech Communication Arts and Sciences Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Speech Department and the executive officer of the doctoral program.

Courses

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

SPEC 7106X Behavioral Analysis of Language, Speech, and Hearing Therapy

30 hours plus conference; 3 credits

Contemporary behavioral theory in diagnosis, clinical practice, and research. Study of individual and group behavior in educational settings. Student demonstration projects.

Prerequisite: a graduate course in clinical methods in speech-language pathology or aural rehabilitation.

SPEC 7107X Speech-Language Acquisition

30 Hours, plus conference; 3 Credits

Contemporary models and key issues in speech-language development; the nature of language and its components; models and theories of language acquisition; neurodevelopmental background; biological, environmental, and social foundations of speech-language development during the prelinguistic period; phonological, morphosyntactic, semantic, and pragmatic development during the preschool years and school-years; hands on experience in collecting, transcribing, and analyzing children's spontaneous speech-language samples.

Prerequisite: An undergraduate course in language development or permission of the deputy chairperson.

SPEC 7114X Instrumentation in Speech and Hearing

30 hours lecture, 30 hours laboratory; 3 credits

Instruction in the use of instrumentation for diagnosis, therapy, and research as applied to clinical and educational environments. Projects to be selected from the student's area of interest.

Prerequisite: a course in the accoustics of speech and hearing.

SPEC 7115X The Therapeutic Relationship in Communication Disorders
30 hours lecture plus conference; 3 credits
Focus on an understanding of the relationships among the therapist, the client, and the family. Exploration of the contributions of social system and institutional supports as applied in clinical and educational settings.

Prerequisite or corequisite: a graduate course in diagnosis or clinical methods in speech-language pathology/audiology or permission of the deputy chairperson.

SPEC 7116X Computer Applications in Clinical and Educational Practice in Speech-Language Pathology and Audiology
30 hours plus conference; 3 credits
The use of personal computers to examine the hardware and software tools available for the evaluation, treatment, and clinical and instructional program management of individuals with varying disabilities; research on product applications and changing technological advances.

Prerequisite: a course in speech-language therapy methods or a course in educational methods.

SPEC 7128X Advanced Anatomy, Physiology, and Neurology of the Speech Mechanism
30 hours plus conference; 3 credits
Anatomy, physiology, and neurology of the speech mechanism and related articulation, respiration, phonation, and resonance functions.

Prerequisite: an undergraduate course in the anatomy and physiology of the speech and hearing mechanism.

SPEC 7139X Organization, Management, and Supervision of Speech and Hearing Programs
30 hours plus conference; 3 credits
Theory and practice of organization, management, supervision of speech-language and hearing programs in clinical and educational settings.

Prerequisite: a graduate course in speech pathology and a graduate course in audiology; or permission of the deputy chairperson.

SPEC 7211X Introduction to Techniques of Research in Speech-Language Pathology and Audiology
30 hours plus conference; 3 credits
Review and critique of basic and applied research concepts and designs in speech, hearing, and language sciences through analysis of examples from the literature. Introduction to data organization and analysis. Students engage in research projects concerning developmental processes and disabilities in clinical and educational environments.

Prerequisite: a course in statistics.

SPEC 7296X Special Problems
45 hours; 3 credits
Directed study supervised by a faculty member. With prior written permission of the deputy chairperson, this course may be repeated once for credit.

Prerequisite: permission of the deputy chairperson.

SPEC 7297X Proseminar in Speech-Language Pathology
45 hours; 3 credits
Intensive study of technical and theoretical problems. Independent laboratory or library research. Detailed reports.

Prerequisite: a graduate course in speech and language disorders.

SPEC 7313X Dysphagia: Evaluation and Management
30 hours plus conference; 3 credits
Examination of the anatomy and physiology of the oropharyngeal swallowing mechanism; normal and abnormal swallowing; interdisciplinary approaches to the evaluation and management of swallowing disorders; consideration of ethical and contemporary issues in feeding and swallowing.

Prerequisite: Speech 7128X [728X] or its equivalent or permission of the deputy chairperson.

SPEC 7316X Special Issues in Education: Classroom and School-wide Learning Environments for Students with Low Incidence Disabilities
30 hours plus conference, 3 credits
Current issues in teaching students with severe and multiple disabilities, including autism spectrum disorders. Focus on emerging trends and research. Validated approaches in curriculum, instruction, life skills, functional behavioral assessment and positive behavioral supports. Examination of the politics of labeling, the constructs of disability, and the influence of school culture on inclusion, transenvironmental planning, and the development of least restrictive environments. Independent and small group study. This course is the same as CBSE 7666T.

Prerequisite: Admission to Advanced Certificate Program in Autism Spectrum Disorders or permission of the program co-director.

SPEC 7317X An Introduction to Autism Spectrum Disorders
30 hours plus conference; 3 credits
Contemporary issues in autism spectrum disorders from an interdisciplinary and cross-paradigm perspective. Collaborative models for assessment and intervention within the fields of speech-language pathology, special education, and school psychology. Emphasis on partnerships with families. This course is the same as CBSE 7685T [751.3T].

Prerequisite: any undergraduate or graduate course in child development, language acquisition, or speech and language disorders; or permission from the deputy chairperson or program head.

SPEC 7318X Neurodevelopmental Speech-Language Assessment and Intervention (0-3 years)
30 hours plus conference; 3 credits
Identification, evaluation, and treatment of infants and toddlers who are at risk for significant communication and feeding disorders. Consideration of normal and atypical developmental processes.

Prerequisite: an undergraduate course in normal speech and language development, and an undergraduate course in speech and language disorders.

SPEC 7319X Speech, Language, and Communication Development of Children on the Autistic Spectrum: Assessment and Intervention
30 hours plus conference; 3 credits
Contemporary issues in speech, language and communication in children on the autistic spectrum. Models of typical and atypical speech, language and communication acquisition. Qualitative differences and unique strengths and challenges. Assessment and intervention from different theoretical perspectives, including developmental and

behavioral approaches, with emphasis on the integration of various models. Consideration of augmentative and alternative communication. (This course is the same as CBSE 7686T [751.4T].)

Prerequisite: Speech 7317X [717X] or CBSE 7685T [751.3T]

SPEC 7320X Curriculum Modifications for Students with Special Needs
45 hours, 3 credits
Adaptation of general education curriculum for teaching students across the range of special needs including giftedness and English language learners. Principles, rationale, and research-validated methods of instruction and assessment in special populations in a variety of settings. Inquiry processes across all content areas and life skills, including literacy, mathematics, social science, and the expressive arts. Focus on the New York State Learning Standards and educational experiences of children and youth from diverse cultural and linguistic backgrounds. Field experiences in schools and a variety of community settings. This course is the same as CBSE 7677T.

SPEC 7321X Language Disorders in Children

30 hours plus conference; 3 credits
Typical and atypical language development. Etiology, characteristics, assessment, and intervention of preschool children's language disorders; play and emergent literacy; cultural-linguistic and individual variation.

Prerequisite: a course in speech and language development.

SPEC 7323X Fluency Disorders

30 hours plus conference; 3 credits
Etiology and characteristics of fluency disorders. Rationale and procedures for assessing and modifying stuttering, reducing anxiety, and enhancing fluency; application to clinical and educational settings.

Prerequisite: a course in clinical methods in speech and language disorders.

SPEC 7324X Speech Disorders in Cerebral Palsy

30 hours plus conference; 3 credits
Historical, etiological, neurophysiological assessment and treatment related to cerebral palsy. Emphasis on associated communication disorders and their impact on academic and social skills.

Prerequisite: a course in speech disorders and a graduate course in the anatomy and physiology of the speech mechanism.

SPEC 7325X Clinical Methods in Speech-Language Pathology
30 hours plus field experience; 3 credits
Theories and methods applied to the treatment of speech and language disorders in clinical and educational settings. Clinical decision making and problem solving regarding goals and procedures for intervention. Contemporary issues in speech-language intervention. Supervised participation in clinical process.

Prerequisite: a course in speech and language disorders.

SPEC 7326X Aphasia and Related Disorders of Speech

30 hours plus conference; 3 credits
Etiology, diagnosis, treatment of adolescents and adults with language difficulties related to acquired aphasia.

Prerequisite: a course in speech and language disorders and a course in the anatomy and physiology of the speech mechanism.

SPEC 7327X Voice Disorders

30 hours plus conference; 3 credits
Normal phonation and resonance. Etiology, characteristics, assessment and treatment of voice disorders as applied to clinical, educational, occupational and related settings.

Prerequisite: a course in speech disorders and a course in the anatomy and physiology of the speech mechanism.

SPEC 7330X Cleft Palate Speech

30 hours plus conference; 3 credits
Pathomorphology, clinical procedures, evaluation, and remedial management of individuals with cleft lip, cleft palate, and related disorders. Diagnostic and treatment procedures. Applications to clinical and educational settings.

Prerequisite: a course in speech disorders and a graduate course in the anatomy and physiology of the speech mechanism.

SPEC 7331X Motor Speech Disorders: Differential Diagnosis, Treatment and Management
30 hours plus conference; 3 credits
Etiology, characteristics, assessment, treatment and management of the dysarthrias and apraxia resulting from disorders of the upper and lower motor neurons, disorders of the cerebellar system, hypokinetic and hyperkinetic disorders of the extrapyramidal system, and impairment of motor speech programming.

Prerequisite: a course in the anatomy and physiology of the speech mechanism.

SPEC 7333X Measurement and Evaluation of Speech and Language Disorders
30 hours plus conference; 3 credits
Critical analysis of measurement and evaluation procedures in diagnosing speech and language disorders. Test administration and interpretation of test results as applied to clinical and educational settings.

Prerequisite: a course in speech and language disorders.

SPEC 7334X Aging: Speech and Language Processes and Disorders
30 hours lecture plus conference and individual work; 3 credits
The effect of aging on speech and language processes and disorders.

Prerequisite: a course in speech and language disorders or permission of the deputy chairperson.

SPEC 7336X Speech and Language-based Learning Disabilities
30 hours plus conference; 3 credits
Typical and atypical development of language in the school-age child and adolescent. Etiology, characteristics, assessment, and treatment of speech and language-based learning disabilities in children and adolescents. Consideration of the interdependence among language, discourse, and literacy skills.

Prerequisite: a course in speech and language acquisition or permission of the deputy chairperson.

SPEC 7337X Articulation and Phonological Disorders

30 hours plus conference; 3 credits
Etiology, characteristics, assessment, and treatment of articulation and phonological disorders in children and adults. Dialectical variations, phonological awareness, and literacy.

Prerequisite: a course in speech disorders.

SPEC 7338X Augmentative Communication

30 hours plus field experience; 3 credits
Etiology, diagnosis, and treatment of severely speech-impaired individuals requiring special augmentative adaptations for communication. Focus on nonelectronic systems, computerized aids, and the development of communication skills for the physically handicapped. Applications to home, clinical, and educational environments.

Prerequisite: a course in cerebral palsy or permission of the deputy chairperson.

SPEC 7361X Auditory Processing Disorders: Assessment and Treatment

30 hours plus conference; 3 credits
Neuroanatomy and physiology of the auditory pathways; behavioral and physiological assessment techniques and management procedures for school-age children and adults.

Prerequisite: Speech U7441X [741X] or permission of the deputy chairperson.

SPEC 7381X Introduction to Assistive Technology

30 hours plus conference; 3 credits
Overview of the field of assistive technology. High and low technologies for communication, education, recreation, vocation, mobility, and independent living. Special input and output devices, access and proper seating and positioning. Issues in service delivery, key laws, and funding for assistive technologies. (Not open to students who completed Speech 7297X [797X], Fall 2002.)

SPEC 7391X Clinical Practicum in Speech-Language Pathology

45 hours; 1 credit
Supervised clinical experience in community clinics, hospitals, nursing homes, and preschool, school-age, and adolescent educational settings. Weekly seminars. Must be completed at the Diana Rogovin Davidow Speech Language Hearing Center. Failure to earn a grade of B or better in any attempt at Speech 7391X [729.1X], 7392X [729.2X] or 7393X [729.3] may result in implementation of a remediation plan, independent of the GPA, as deemed appropriate by the department. Following remediation, failure to earn a grade of B or better on a subsequent attempt at Speech 7391X [729.1X], may result in restrictions on registration in the program. Continued enrollment in all clinical practicum courses is also contingent upon the student's demonstration of standards of professional conduct and demeanor as deemed appropriate by the department in conjunction with ASHA guidelines and New York State requirements. 7391X [729.1X] Diagnostics 7392X [729.2X] Rehabilitation 7393X [729.3X] Advanced Diagnostics and/or Rehabilitation Practicum hours will be counted toward minimum requirements for ASHA certification, teacher certification, and state licensure only in those courses in which a student earns a grade of B or better.

Prerequisite of 7391X: a grade of B or better in Speech 7333X [733X] or permission of the deputy chairperson.

SPEC 7392X Clinical Practicum in Speech-Language Pathology

45 hours; 1 credit
Supervised clinical experience in community clinics, hospitals, nursing homes, and preschool, school-age, and adolescent educational settings. Weekly seminars. Must be completed at the Diana Rogovin Davidow Speech Language Hearing Center. Failure to earn a grade of B or better in any attempt at 7392X [729.2X] may result in implementation of a remediation plan, independent of the GPA, as deemed appropriate by the department. Following remediation, failure to earn a grade of B or better on a subsequent attempt at 7392X [729.2X] may result in restrictions on registration in the program. Continued enrollment in all clinical practicum courses is also contingent upon the student's demonstration of standards of professional conduct and demeanor as deemed appropriate by the department in conjunction with ASHA guidelines and New York State requirements. 7391X [729.1X] Diagnostics 7392X [729.2X] Rehabilitation 7393X [729.3X] Advanced Diagnostics and/or Rehabilitation Practicum hours will be counted toward minimum requirements for ASHA certification, teacher certification, and state licensure only in those courses in which a student earns a grade of B or better.

Prerequisite of 7392X: a grade of B or better in Speech 7325X [725X] or permission of the deputy chairperson.

SPEC 7393X Clinical Practicum in Speech-Language Pathology

45 hours; 1 credit
Supervised clinical experience in community clinics, hospitals, nursing homes, and preschool, school-age, and adolescent educational settings. Weekly seminars. Speech 7393X [729.3X] may be taken for credit four times. Failure to earn a grade of B or better in any attempt at 7393X [729.3X] may result in implementation of a remediation plan, independent of the GPA, as deemed appropriate by the department. Following remediation, failure to earn a grade of B or better on a subsequent attempt at 7393X [729.3X] may result in restrictions on registration in the program. Continued enrollment in all clinical practicum courses is also contingent upon the student's demonstration of standards of professional conduct and demeanor as deemed appropriate by the department in conjunction with ASHA guidelines and New York State requirements.7391X [729.1X] Diagnostics 7392X [729.2X] Rehabilitation 7393X [729.3X] Advanced Diagnostics and/or Rehabilitation Practicum hours will be counted toward minimum requirements for ASHA certification, teacher certification, and state licensure only in those courses in which a student earns a grade of B or better.

Prerequisite of 7393X: a grade of B or better in Speech 7392X [729.2X] or permission of the deputy chairperson.
Prerequisite or corequisite of 729.3X: Speech 7391X [729.1X] or permission of the deputy chairperson.

SPEC 7394X Seminar and Clinical Practicum: Students with Special Needs

150 hours plus conference, 3 credits
Supervised instruction in teaching young children and school-aged children with special needs. Supervision provided by college faculty in the student's work setting. Discussion with school-based supervisors. Projects related to school and supervisory experiences; a minimum of four supervisory sessions per semester. This course is the same as CBSE 7681T.

Prerequisite: Admission to Advanced Certificate Program in Autism Spectrum Disorders or permission of the program co-director.

SPEC U7441X Clinical Audiology

30 hours plus conference; 3 credits
Clinical aspects of audiologic test procedures, interpretation, and aural (re)habilitation of hearing
impairments relevant to the practice of speech-language pathology.

Prerequisite: an undergraduate course in audiology.

SPEC 7535X Introduction to Bilingual and Second Language Acquisition
30 hours plus conference; 3 credits
Survey of bilingual and second language acquisition theory and research as it relates to differentiating speech and language difference from disorder. Examination of research associated with the socio- and psycho-linguistic, cognitive, and sociocultural dimensions of bilingual and second language development as well as bilingual education and multicultural perspectives. Data collection and analysis. Applications to educational and community settings. This course is the same as CBSE 7360X [EDUC 798X].

Prerequisite: a course in normal language acquisition or permission of the deputy chairperson.

SPEC 7536X Assessment & Intervention for Bilingual and Second Language Learners
30 hours plus conference; 3 credits
Examination of cultural/linguistic competencies necessary to provide appropriate assessment and intervention for bilingual and second language learners. Examination of qualitative and quantitative procedures with consideration to individual linguistic, cultural, and socioeconomic background to determine difference vs. disorder. Applications to educational and community settings. This course is the same as CBSE 7359X [766.2X].

Prerequisite: A course in normal development of language; or permission of the deputy chairperson.

SPEC 7551X Professional Practice in Educational Settings

30 hours plus field experience; 3 credits
Implementation of speech-language services in schools. Methodologies applicable to various service delivery models; educational law; strategies for effective participation in legally mandated activities in order for the speech and language impaired student to achieve prescribed academic standards. Observation of various classroom models.

Prerequisite: Speech 7325X [725X].

SPEC 7600X Speech Science and Acoustic Phonetics

30 hours plus conference; 3 credits
Acoustic phonetic processes in the production and perception of speech; physiological correlates. Laboratory demonstrations.

Prerequisite: a course in each of the following: phonetics, anatomy of speech mechanisms, and acoustics of speech.

SPEC 7612X Language and Speech of Hearing-impaired Children
30 hours plus conference; 3 credits
Development, diagnosis, and treatment of speech and language in children with hearing impairments. Applications to clinical and educational settings.

SPEC 7613X Proseminar in Audiology

45 hours; 3 credits
Intensive study of technical and theoretical problems. Independent laboratory, clinical, library research. Detailed reports.

Prerequisite: Speech U7605X [740X] and U741X; or the equivalent of the courses.

SPEC 7691X Clinical Practicum in Audiology

45 hours; 1 credit
Supervised clinical experience. Weekly seminars. Speech 7691X [749.1X] must be completed at the Diana Rogovin Davidow Speech Language Hearing Center. Failure to earn a grade of B or better in any attempt at Speech 7691X [749.1X] may result in implementation of a remediation plan, independent of the GPA, as deemed appropriate by the department. Following remediation, failure to earn a grade of B or better on a subsequent attempt at Speech 7691X [749.1X] may result in restrictions on registration in the program. Continued enrollment in all clinical practicum courses is also contingent upon the student's demonstration of standards of professional conduct and demeanor as deemed appropriate by the department in conjunction with ASHA guidelines and New York State requirements. (Speech 7691X [749.1X] is not open to students who have completed Speech 749X.) Practicum hours will be counted toward minimum requirements for ASHA certification and state licensure only in those courses in which a student earns a grade of B or better.

Prerequisite or corequisite: U7441X [741X] or permission of the deputy chairperson.

SPEC 7701X The Nature of Stuttering

30 hours plus conference; 3 credits
Theories and research findings relating to the onset, development, persistence of stuttering.

Prerequisite: a course in speech and language disorders.

SPEC 7801X Speech Communication and Group Dynamics

45 hours; 3 credits
Influence of group dynamics on speech communication effectiveness. Function of speech in formation of social groups. Current research in speech communication theories and group structure analysis.

Prerequisite: permission of the deputy chairperson.

SPEC 7802X Public Address

45 hours; 3 credits
Historical and rhetorical analysis of representative American public speakers.

Prerequisite: permission of the deputy chairperson.

SPEC 7803X Research in Rhetoric and Public Address

45 hours; 3 credits
Individual and group study of historical, descriptive, experimental research methods. Bibliographical resources and professional writing in rhetoric and public address.

Prerequisite: permission of the deputy chairperson.

SPEC 7804X Speech Criticism

45 hours; 3 credits
Comparative study of various methods of rhetorical criticism: traditional (neo-Aristotelian and historical); experiential (eclectic, sociocultural-psychological); grammatical-semantical; dramatistic; others.

Prerequisite: permission of the deputy chairperson.

SPEC 7805X Conflict Management: A Business Communication Perspective
45 hours; 3 credits
Current research findings, theories, and practices in conflict settings with respect to oral communication. Conflict resolution, negotiation, and mediation skills applied to the business environment. Simulated case studies and individual evaluations. Experience in developing the necessary conflict management skills.

Prerequisite: Speech 2719 [19.1]; and Speech 2623 [23] or 33 or permission of the chairperson.

SPEC 7821X Seminar in Rhetoric and Public Address

45 hours; 3 credits
Examination of the types of rhetorical and oratorical research. Independent research and reports. Students may repeat this course twice for credit.

Prerequisite: permission of the deputy chairperson.

SPEC 7822G Thesis Research

Hours to be arranged; no credit
Research for master's thesis supervised by a faculty member. Students register for this course only once.

Prerequisite: permission of the deputy chairperson.

The following inactive course(s) will only be offered if there is sufficient demand:

SPEC 7807X Studies in Argumentation and Debate

Television and Radio

Department office: 304 Whitehead Hall
Phone: 718-951-5555

Full-time Faculty

Professors: Fry, MacLelland, Rodman, Sosa, Wasser
Associate Professors: Jannone, Patkanian
Assistant Professors: Anderson, Hashmi, Macias, Moore, Robinson
Lecturer: Dunphy

The Department of Television and Radio is held in such high regard that the New York media--the most powerful and influential broadcast market in the world--seeks out our graduates for positions in their organizations. Our facilities are all-encompassing and state-of-the-art in both television and radio, and our faculty members are experts in the artistic, business, and scholarly aspects of media. From music performances to historical programming, in the M.F.A. program you learn how to create and edit shows and ready them for broadcasting. In the M.S. program you will learn how rapid changes in communication technologies are revolutionizing media management and programming. Our affiliations with ABC, CNBC, CBS, SONY Music, HBO, and numerous other media organizations can provide you with opportunities to intern and gain hands-on experience.

The many graduates who have gone on to distinguished media careers not only keep in touch with Brooklyn College but also keep us apprised of the latest developments in the industry, which enables us to keep pace with any and all advancements.

M.F.A. degree program in television production
HEGIS code 0603; SED program code 84002

The M.F.A. in television production prepares students for professional media careers as writers, producers, directors, and editors. This production-based curriculum exposes students to many program genres including, but not limited to, documentary, drama, news, sports, art and cultural, experimental, and demonstration. Students develop content and produce and direct both single and multiple camera, live switched productions. The M. F. A. program is built on a foundation of production aesthetics, critical analysis, and media literacy. Students are taught how to create programs that inform, entertain, and instruct audiences by interpreting content through a social, political and economic perspective. Our graduates work as media professionals in broadcast, cable, and institutional production and post-production facilities. Many of our graduates continue their careers as faculty members at the college and university level.

Matriculation requirements

Applicants must offer a well-rounded undergraduate record of at least a 3.0 GPA that suggests promise as a creative communication professional. Each applicant's record is considered individually in this respect.

Applicants must submit an essay about contemporary media and society such as an original essay written to accompany the application, or a 5 - 10 page scholarly paper that was written as an undergraduate. Alternately, applicants may submit a scholarly paper in any subject related to their undergraduate major. Applicants must also submit a biographical statement of 500 to 1000 words that indicates experience, interest, and professional objectives. This statement should provide background information about the applicant and what he/she hopes to achieve by enrolling in the MFA program. In addition the applicant must submit three letters of recommendation.

Applicants are encouraged to submit examples of creative work (print or electronic) in support of their application. However, previous professional or academic media experience is not required for admission to the program.

Prospective students are welcome to visit campus for a personal interview, to attend a graduate production class, and to meet students and faculty, by contacting the Deputy Chair for Graduate Studies. The department MFA admission committee may require an interview of applicants.

International applicants are required to pass the Test of English as a Foreign Language (TOEFL) with a score of at least 580 on the paper-based test or 237 on the computer-based test or 92 on the internet-based test, before being considered for admission.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission" of the Graduate Bulletin.

Degree requirements

Forty-nine credits are required for the degree.

At least 40 credits must be taken in the Television and Radio Department. Of the 49 credits, 34 credits must be taken in departmental required

Television and Radio courses; the remaining 15 credits are elective, and must be approved in consultation with the director of the M.F.A. program and the graduate deputy chairperson.

Every M.F.A. student shall be required to successfully complete the department's graduate core, and the Television Production specialization courses.

The graduate core consists of: Television and Radio 7701X, to be taken in the first semester, and 7710X, to be taken in the student's final semester of course work. The two courses total 6 credits.

The Television Production specialization for M.F.A. students encompasses the following courses: Television and Radio 7732X, 7752X, 7740G, 7781G, 7782G, 7783G, 7784G, 7851G, 7852G, 7853G, and 7854G, for a total of 28 credits.

The remaining 15 credits are elective. No more than 9 credits of these may be taken in departments outside the Television and Radio Department.

M.F.A. students may offer 3 credits of a Television Production Externship (Television and Radio 7769X) toward the M.F.A. degree. This externship provides on-the-job production experience under the supervision of a selected television professional.

Creative work in the program must culminate in submission of either a finished television program or other creative audiovisual material (e.g., a CD-ROM or a fully developed Web site). The specific parameters of the student's creative thesis project must be formally approved by the director of the M.F.A. program in consultation with the student's faculty adviser. This audiovisual material shall meet the professional production and content standards appropriate for granting a terminal academic degree. The project will be accompanied by a production book acceptable to the department.

Courses in the Television and Radio Department offered toward a degree must be 7000-level courses.

M.S. degree program in media studies
HEGIS code 0603; SED program code 77735

This program is a research and theory based program that emphasizes the connection between theory and practice. The curriculum examines the environments and impact of electronic media from social, political, cultural and economic perspectives. Students gain in-depth knowledge of the television and radio industries, emerging digital media industries, media literacy, and key critical, theoretical and research perspectives on media broadly. The program prepares students to apply their education in a variety of professional positions or to continue their education by enrolling in a doctoral program.

Matriculation requirements

Applicants must offer a well-rounded undergraduate record of at least a 3.0 GPA that suggests promise of success in the program. Each applicant's record is considered individually in this respect. Applicants must submit an essay about contemporary media and society, which can be an original essay written to accompany the application, or a 5 - 10 page scholarly paper that was written as an undergraduate. Alternatively, applicants may submit a scholarly paper in any subject related to their undergraduate major. General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."
Applicants must submit the Graduate Record Examination Aptitude Test score or the Miller Analogy Test Score. International applicants are required to pass the Test of English as a Foreign Language (TOEFL) with a score of at least 580 on the paper-based test or 237 on the computer-based test or 92 on the internet-based test, before being considered for admission.

Degree requirements (30 credits)

Thirty credits are required for the degree. Other than required courses, credits required for the degree must be in courses chosen in consultation with the graduate deputy chairperson or program advisor. The program of study must be approved by the department. Courses in the Television and Radio Department offered toward the degree must be 7000-level courses. Students must complete 30 credits, at least 24 credits of which must be taken in the Television and Radio Department.
Students may choose one of two possible tracks of study in the program. The first track is the M.S. in Media Studies, and the second track is the M.S. in Media Studies, Media Literacy Concentration.
Every student shall be required to successfully complete the following six core graduate courses:
TVRA 7701X, 7710X, 7712X, 7713X, 7714X, and 7945.
Students in the M.S. in Media Studies, Media Literacy concentration are required to take, in addition to the six core graduate courses, the following:
TVRA 7716X and 7769X.
Students in both tracks are encouraged to take the following:
TVRA 7716X, 7772X, 7726X, and 7728X.

Students are also eligible to take as electives the following two television production courses: Television and Radio 7730X and 7740G. Television and Radio 7769X and 7796X will be available each semester. Students may take each of these courses only once during their program of study. Up to 6 credits may be taken outside the department with the approval of the graduate deputy chairperson or program advisor.

Students must pass a written comprehensive examination. The examination will consist of questions in areas in which the student has taken courses during his/her course of study. Information about the comprehensive examination is in the section "Academic Regulations and Procedures."

Honor Society

Alpha Epsilon Rho is a national honor society in radio and television. Members are selected from both undergraduate and graduate students on the basis of achievement.

Courses

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

TVRA 7716X Seminar in Media Literacy

45 hours; 3 credits
Historical development and current practices of the media literacy movement nationally and internationally; principles of media literacy. Students will engage with leaders and practitioners of media literacy, and will construct projects around media literacy needs and issues in the community.

Prerequisite: TVRA 7701X

TVRA 7774X Television Magazine Programs

45 hours; 3 credits
Analysis and production of TV Magazine Programs: different types; different audiences; different media. Production schedules, techniques, research and development. A survey of post-production strategies; general considerations; special considerations; archives and use of image libraries; legal considerations; standards and practices; public affairs.

Prerequisite: Permission of the deputy chair,

Broadcast concepts

TVRA 6614X Mass Media and Education

45 hours; 3 credits
Theory and practice of instruction using televised materials. Commercial and noncommercial programming for elementary, secondary, higher, and adult education. Utilization and evaluation of materials. (Not open to students who have completed Television and Radio 689X.)

TVRA 7701X Introduction to Media Studies

45 hours; 3 credits
Introduction to the literature of mass media scholarship, methods of inquiry, bibliographic skills, and topical issues in the field. To be taken in student's first semester.

Prerequisite: permission of the deputy chairperson.

TVRA 7710X Media Studies Seminar

45 hours; 3 credits
Current topics in electronic media. Emphasizes both entertainment industry and critical/cultural perspective. To be taken in student's final semester.

Prerequisite: Television and Radio 7701X [701X] and permission of the deputy chairperson.

TVRA 7712X The Digital Media Environment

45 hours; 3 credits
Examination of the relationship between digital media and society within the contexts of social and cultural theory. Emphasis on perspectives of cultural studies and media ecology. Analysis of changes in industry, audience, content, everyday practices and consciousness.

Prerequisite or corequisite: Television and Radio 7701X or permission of the graduate deputy chairperson.

TVRA 7713X Media and Communication History and Regulation

45 hours lecture; 3 credits
In-depth industrial and cultural historical overview of the development of electronic mass communication. Historical and legal approaches and methods.

Prerequisite or corequisite: Television and Radio 7701X [701X]; or permission of the deputy chairperson.

TVRA 7714X Critical Analysis of Media

45 hours; 3 credits
Textual and analytical approaches the scholarly study of media. Survey of the most significant Marxist, structuralist, semiotic and formalist readings of media over the past one hundred years.

Prerequisite or corequisite: Television and Radio 7701X [701X]; or permission of the deputy chairperson.

TVRA 7715X Media Reception: Processes and Practices

45 hours; 3 credits
Introduction to sociological, ethnographic, psychoanalytic, cognitive, and critical theories used to understand media audiences and processes of reception. Historical development of the various approaches; audience response; construction of the mass audience and subcultures; fan production.

Prerequisite or corequisite: Television and Radio 7701X [701X]; or permission of the deputy chairperson.

TVRA 7728X Global Media

45 hours; 3 credits
The globalization of television and radio; implications of transnational satellite communication; problems and opportunities in international coproduction; changing patterns in distribution to a global market. Analysis of program genres and styles in the context of language, culture, and developmental differences. (Not open to students who have completed Television and Radio 7960X [796X], "Special Problems in World Television.")

Prerequisite: Television and Radio 7701X [701X]; or permission of the deputy chairperson.

TVRA 7797X Special Topic in Mass Media

45 hours; 3 credits
Topics vary from term to term. Students may take this course twice but may not repeat a topic.

Prerequisite: Television and Radio 7701X [701X].

Planning and Management

TVRA 7722X Seminar in Television and Radio Program Development and Audience Analysis
45 hours; 3 credits
Process of television and radio program development. Conceiving and pitching a program idea; understanding genre cycles; determining windows of distribution; methods of measuring audiences; types of data collection and reporting; use of demographic data to make programming and management decisions.

Prerequisite or corequisite: Television and Radio 7701X [701X]; or permission of the deputy chairperson.

TVRA 7725X Television and Radio Management Theory and Practice
45 hours; 3 credits
Theories of management of electronic mass media communication; industry structure, management styles and practices; finance and budgeting systems; human resource management; negotiation strategies.

Prerequisite: Television and Radio 7701X [701X].

TVRA 7726X Seminar in Media Industries

45 hours; 3 credits
Current practices of media industries including program development and distribution across platforms, convergence, shifting audiences. Contemporary case studies used to illustrate issues and changes in the digital media industry.

Prerequisite or corequisite: Television and Radio 7701X or permission of the deputy chairperson.

TVRA 7727X Media Marketing and Promotion

45 hours; 3 credits
Principles of marketing and promotion. Developing marketing and promotion strategies. Implementing campaigns. Evaluating their effectiveness in attracting audiences and building audience share in increasingly competitive electronic mass communication industries. This course is the same as Business 7203X [703X].

Prerequisite or corequisite: Television and Radio 7701X [701X]; or permission of the deputy chairperson.

Television production

TVRA 7730X Applied Media Aesthetics

3 hours; 3 credits
Analysis of the various audiovisual aesthetic "fields"-- light, color, two-dimensional and three-dimensional space, time, motion/pace/rhythm, sound; narrative storytelling devices; and character types as cultural archetypes.

Prerequisite or corequisite: Television and Radio 7701X [701X].

TVRA 7732X Multi-Camera: Directing and Producing

30 hours lecture, 30 hours laboratory; 3 credits
Producing and directing various program formats including panel discussion, news, fiction, music, dance and other genres suitable for multiple camera.

Prerequisite: matriculation in the M.F.A. program.

TVRA 7733G Sound Design

30 lecture, 30 hours laboratory; 3 credits
Principles and techniques in sound design for television production and sound art. Aesthetics and techniques of sound design through all stages of production: research and development through post-production. Students will learn how to construct a complex soundscape in a variety of digital platforms. The course is taught as a workshop.

Prerequisite: Permission of the Deputy Chair.

TVRA 7736X Advanced Directing

30 hours lecture, 30 hours laboratory; 3 credits
Authorship and aesthetics. Director's vision and craft. All stages of production: pitch and proposal, screenwriting, budget and logistics, casting, rehearsals and performance, visualization, production design, staging and directing mise-en-scene, editing, post-production and distribution.

Prerequisite: Television and Radio 7732X [732X] or 7782X [782X] for M.F.A. in Television Production candidates; PIMA 7010G [701G] for advanced certificate candidates in the Performance and Interactive Media Arts program.

TVRA 7740G Scriptwriting

45 hours; 3 credits
The art of visual storytelling. Principles of story design. Various script formats. Creating and developing characters. Essentials of dramatizations. Structure and plot.

Prerequisite: Matriculation for the M.F.A. degree or permission of the deputy chairperson.

TVRA 7749X Study Abroad India: Documentary Production and Cultural Studies
15 hours lecture, 60 hours lab; 3 credits
A 21-day course that combines lectures, sightseeing, and documentary production work.

Prerequisite: permission of the instructor

TVRA 7750X Directing Television Adaption: Analysis and Production
30 Lecture Hours and 30 Lab Hours; 3 credits
In-depth analysis of scenes from critically acclaimed adaptations of classic and modern literary and dramatic text. Art of adaptation. Principles and techniques of adapting for television, focusing on interpretation of texts and constructing its audio-visual realization through all phases of production: research and development, working with actors, set design and lighting, shot composition, editing and mixing sound in multi-camera live environment and post production. Students direct their own interpretation of a script of their choice. For the final common class project students choose one production position, according to their interests and skills.

Permission of the Deputy Chair.

TVRA 7752X Single Camera: Directing and Producing

30 hours lecture, 30 hours laboratory; 3 credits
Developing and designing content suitable for single camera production in a variety of genres. Director's and Producer's roles in creating and distributing such programs.

Prerequisite: matriculation for the M.F.A. degree in television production.

TVRA 7769X Fieldwork in Electronic Media

200 hours of fieldwork plus conference hours to be arranged; 3 credits

Placement in a professional electronic media organization for intensive supervised assignment. Joint supervision by a faculty member and member of the organization. Regular conferences with faculty supervisor. Preparation of written report on fieldwork experience.

Prerequisite: matriculation in the M.S. or M.F.A. program and permission of the deputy chairperson.

TVRA 7772X Broadcast and New Media Journalism

45 hours; 3 credits
Analysis and evaluation of broadcast and new media news, editorials, commentaries. Examination of network and local news operations. Relationship between print and electronic news reporting considered in terms of their effect on the audience. Historical study of the concepts of free speech, investigative reporting, and the right of citizens' access to government information.

Prerequisite or corequisite: Television and Radio 7701X [701X].

TVRA 7776X Art of Documentary

45 hours; 3 credits
In-depth analysis of critically acclaimed documentaries across various distribution platforms. Principles and techniques of nonfiction storytelling. Lectures, screening and discussion about authorship, evidence, ethics and responsibility. Structure and formal techniques.

Prerequisite or corequisite: Television and Radio 7701X [701X] or 786.5X or permission of the deputy chairperson.

Internship courses

TVRA 7781G Post-Production: Theory and Practice

15 hours lecture, 90 hours laboratory; 4 credits
Design and operation of postproduction workflow; the technique, craft, and art of editing; fundamental principles of montage, continuity and dialogue editing, with a focus on telling a compelling story. Students assemble short projects from prerecorded footage.

Prerequisite: matriculation for the M.F.A. degree in television production.

TVRA 7782G Single Camera: Advanced Directing and Producing

15 hours lecture, 60 hours laboratory; 3 credits
Director's vision, craft and responsibility. All aspects of pre-production, production, and post-production. Students write, direct, produce, design, shoot and edit 10-20 min. projects. Fiction and non-fiction. Course prepares students for their 30 min. MFA single camera production.

Prerequisite: Television and Radio 7781G [781G].

TVRA 7783G Advanced Multi-Camera Production I

15 hours lecture, 60 laboratory; Independent work; 4 credits
Advanced techniques of directing and producing multi camera programs. Set design, facilities and location management, permissions and release forms. Production package. Rotation of crew assignments for in-studio and remote location productions. Each student creates, designs, directs and produces one 30 minute program in partial fulfillment of the requirements for the MFA degree.

Prerequisite: Television and Radio 7732G [732G].

TVRA 7784G Advanced Multi-Camera Production II

15 hours lecture, 60 hours laboratory; Independent work; 4 credits
Advanced techniques of directing and producing a multi camera program. Set design, facilities and location management, permissions and release forms. Production package. Rotation of crew assignments for in-studio and remote location productions. Each student creates, designs, directs and produces one 30 minute program in partial fulfillment of the requirements for the MFA degree.

Prerequisite: Television and Radio 7783G [783G].

TVRA 7851G MFA Production Development: Research and Proposal

45 hours laboratory; 1 credit
Develop and research ideas, write treatments. Authorship and aesthetics. Genre and style. Several drafts of proposal submitted.

Prerequisite: matriculation for the M.F.A. degree.

TVRA 7852G MFA Production Development: Script and Production Package

45 hours laboratory; 1 credit
Pre-production. Script: writing treatment, script and extended proposal (for documentary). Several drafts submitted. Design and plan the production. Budget and schedule. Pitching two ideas to a committee of faculty members.

Prerequisite: matriculation for the M.F.A. degree.

TVRA 7853G MFA Production Development: Post-Production I

45 hours laboratory; 1 credit
Post-production. Assembly edit. Screening and discussion with peers and faculty. Sound design. Special effects and graphics.

Prerequisite: matriculation for the M.F.A. degree.

TVRA 7854G MFA Production Development: Post-Production II

45 hours laboratory; 1 credit
Final edit based on feedback received last semester and additional production. Screening and discussion with peers and faculty. Sound mix. Color correction. Preparing for broadcast on CUNY TV. Production Book. Screening and defending the MFA production for the committee of three faculty members.

Prerequisite: matriculation for the M.F.A. degree.

Research courses

TVRA 7925X Research Practicum in Media Studies

45 hours fieldwork; 1 credit
Directed research project under supervision of a faculty member. Weekly meetings to evaluate and monitor progress. With the prior permission of the deputy chairperson, this course may be taken three times.

Prerequisite: Television and Radio 7701X [701X] and the permission of the deputy chairperson.

TVRA 7945X Media Research Methods

45 hours; 3 credits
Survey of various quantitative and qualitative media and audience research methods, including content analysis, survey analysis, focus groups, ethnography and discourse analysis. Students complete original research data collection and written reports.

Prerequisite: Television and Radio 7701X.

TVRA 7960X Special Problems

45 hours; 3 credits
Directed study supervised by a faculty member. With prior written permission of the deputy chairperson, this course may be repeated once for credit.

Prerequisite: permission of the deputy chairperson.

Theater

Department office: 317 Whitehead Hall
Phone: 718.951.5666

Full-time Faculty

Professors: Bonczek, Bullard, Stein, Thomson, Vivier
Associate Professors: Cohen, Easley, Hughes, Marsh , Richardson, Snider-Stein, Tesman
Assistant Professor: Townsend

The Department of Theater is one of New York City's leading institutions in the training of actors, directors, set/costume/lighting designers, dramaturgs, performing arts managers, and theater technicians. The department offers a rich array of courses, workshops, and seminars that cover every conceivable aspect of these disciplines, so that students can pursue a career in their choice of one or more of them. Guest artists at special lectures, seminars and workshops have included Joel Grey, Betty Buckley, the team of John Kander and Fred Ebb, and other major theater personalities.

The Theater Department takes full advantage of the extraordinary theater resources of New York City. Students have opportunities for practicum/internship residencies at some of the city's most prestigious theater organizations: Manhattan Theater Club, Second Stage, Primary Stages, New York Shakespeare Festival, Playwrights Horizons, The Public Theater, Lincoln Center, the New York City Opera, the Brooklyn Academy of Music, Carnegie Hall, Jujamcyn Theaters, Columbia Artists Theatricals, Roundabout Theater Company, Don Buchwald Talent Associates, the Drama League, and many others. In addition to all these offerings, the department puts on six or more productions yearly in theaters on campus.

M.A. degree program in theater
HEGIS code 1007; SED program code 04002

The Department of Theater offers a master of arts degree in theater, with emphasis on theater history and criticism. This 33-credit program requires a minimum of 27 credits to be completed in the Department of Theater with the remaining credits chosen in consultation with the program head. The program is an important step toward a doctorate in theater.

Matriculation requirements

Applicants must offer at least 18 credits in theater courses including at least one course in each of the following: dramatic literature, theater history, and theater production.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Thirty-three credits are required for the degree.

The following courses are required: Theater 7121X, 7122X, 7211X, 7212X, 7213X, 7221X, 7222X, 7742X.

At least 27 credits must be completed in courses in the Department of Theater. The remaining credits required for the degree must be in courses chosen in consultation with the program head.

Students must submit a thesis acceptable to the department. Information about requirements for the thesis is in the section "Academic Regulations and Procedures."

Courses in the Department of Theater offered toward the degree must be 7000-level courses.

The program of study must be approved in advance by the program head.

M.F.A. degree program in theater
HEGIS code 1007; SED program code 76211

The Department of Theater offers a master of fine arts degree in theater with a concentration in one of the following areas: performing arts management, acting, directing, or design. The two-year, 60-credit program prepares students for leadership and professional careers in each area of concentration through a combination of practical and theoretical courses as well as through internships with major institutions in the New York metropolitan area.

Matriculation requirements

Acting: Applicants must offer at least 18-21 credits in acting courses. Consideration will also be given to applicants who do not meet course requirements but have equivalent experience or unusual talent in the chosen concentration. Such applicants should consult the head of concentration directly. Applicants must apply to the head of concentration for an audition/interview appointment once their application has been submitted.

Design and technical production: Applicants must offer at least 18 credits in theater courses including courses in directing, design, and theater production, or in such design-related courses as architecture, art history, and painting. Applicants must be interviewed by the Theater Department or submit a portfolio directly to the Theater Department at the time of application.

Directing: Applicants must offer at least 18 credits in theater courses including courses in acting, directing, dramatic literature, theater history, and stagecraft. A production book for an actual or proposed production must be submitted directly to the Theater Department at the time of application. If possible, applicants should arrange to be interviewed by the Theater Department.

Performing arts management: Applicants must offer at least 18-21 credits or the equivalent in courses in one of the following: dance, fine arts, music, or theater. Applicants must submit an essay on professional goals. Applicants must be interviewed by the Theater Department.

Consideration is also given to applicants who do not meet course requirements but have equivalent experience or unusual talent in the chosen concentration. Such applicants should consult the head of concentration.

A request for an audition or interview appointment may be made by letter or telephone to the head of the relevant concentration.

General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

Degree requirements

Sixty credits are required for the degree.

Students must also submit a thesis based on a thesis project and/or production acceptable to the department. Information about requirements for the thesis is in the section "Academic Regulations and Procedures."

Prior to the above, all students must undergo a pre-thesis evaluation (consisting of a work-in-progress shown to the faculty, an academic progress review by faculty, or both) by the time they complete 24 credits. If a student's progress is not deemed satisfactory by the head of the relevant concentration, the student will be denied the approval of a thesis production or project until the deficiencies noted in written form to the student have been corrected.

Students must complete requirements in one concentration as follows. No student may exceed a total of 12 credits in practicum and/or externship courses. The remaining credits required for the degree must be in courses chosen in consultation with the head of concentration.

Acting: Theater 7321X, 7322X, 7323X, 7324X, 7331X, 7332X, 7333X, 7334X, 7341X, 7342X, 7325X, 7343X, 7344X, 7351X, 7352X, 7353X, 7354X, and 7742X. Acting candidates are required to audition for all departmental productions and must accept roles as cast. Before taking Theater 778X, students must perform in a pre-thesis role approved by the head of concentration, and may serve as a production running crew supervisor.

Design and technical production: Theater 7212X, 7213X, 7415X, 7431X, 7433X, 7435X, 7421X, 7721X, 7722X, 7723X, 7742X; and a minimum of three additional courses in design and technical production. Before taking Theater 7742X, students must complete designs for actual productions at the experimental or thesis production level and must complete a design for a major production in fulfillment of the practicum course requirements.

Directing: Theater 7121X or 7122X, 7311X, 7212X or 7221X and 7213X or 7222X, 7431X or 7433X or 7435X, 7611X, 7511X, 7512X, 7513X, 7721X or 777.9X or 778.9X, 7622X or 7622X, 7723X, 7516X, and 7514X. Before taking Theater 7516X, students must participate in such production capacities as actor, stage manager, technician, and/or assistant director in fulfillment of the practicum course requirements.

Performing arts management: Theater 7212X, 7213X, 7442X, 7617X, 7619X, 7611X, 7612X, 7613X, 7615X, 7616X, 7621X or 778.9X, 7622X, 7623X, and Accounting 7101X. With a few exceptions, students must also take Theater 7631X, which requires the satisfactory completion of a ten- to fifteen-week residency with a professional arts organization or agency approved by the chairperson and a thesis report based on the residency experience.

Courses in the Theater Department offered toward the degree must be 7000-level courses. The program of study must be approved in advance by the head of concentration.

CUNY Ph.D.

The City University of New York offers a doctoral program in theater. General information about CUNY Ph.D. programs is in the chapter "Support for Academic Success in Graduate School." Theater Department courses may be credited toward the CUNY doctoral degree with permission of the executive officer of the doctoral program. For information, students should consult the deputy chairperson of the Theater Department and the executive officer of the doctoral program.

Courses

Unless a prerequisite is specific, students may apply graduate or undergraduate courses toward fulfillment of that prerequisite.

THEA 7430X Stage Design Concepts

45 hours; 3 credits
Introduction to the principles of Stage Design; including Set, Costume and Lighting Design, and their application to design problems.

Prerequisites: Permission of the Chairperson or Concentration head

Dramaturgy

THEA U7111X Introduction to Dramaturgy

30 hours plus conference; 3 credits
Introduction to the history and practice of dramaturgy in Europe and the United States since the eighteenth century. Development of basic dramaturgical skills: selection and analysis of classics and new plays, production research, principles of cutting, collaborative techniques, institutional dramaturgy.

THEA U7121X Development of Dramatic Structure I

30 hours plus conference; 3 credits
Analysis of dramatic structure in representative major plays of Greek, Roman, medieval, Renaissance playwrights. Fall term.

THEA U7122X Development of Dramatic Structure II

30 hours plus conference; 3 credits
Analysis of dramatic structure in representative major plays of eighteenth-century to twentieth-century playwrights. Spring term.

THEA U7131X Models of Collaboration

2 hours and conference; 3 credits
Continuation of Theatre U7111X [U708X]. Further explorations into the nature and practice of dramaturgy. Special attention to the process of collaboration. Study of collaborations by artists of significance. Development of individual models through the collective dramaturgy of the class and through teams of artists undertaking two major projects. Development of such fundamental dramaturgical expertise as storytelling and interpretation within a clearly formulated aesthetic framework.

Prerequisite: Theater U7111X [708X] and/or approval of instructor or program head.

THEA U7132X Problems in the Translation of Dramatic Texts

30 hours plus conference; 3 credits
Introduction to various theories of translation from John Dryden to Jacques Derrida. Creation of English translation of a stage or screen play. Seminar and writing workshop format.

Prerequisite: Reading knowledge of a foreign language.

THEA 7141X Theater in the Classroom

30 hours plus field experience; 3 credits
Theater work in classroom settings. Existing models of theater arts in education. Using theater, improvisation, and creative drama to explore specialized subject areas and pedagogy. Practical studio work. The classroom as theater. Collaboration of education and theater students on theater in education projects, including workshops in focus schools. Mainstage and outside productions. Visits to area public schools. Creation of age-appropriate theater study guides. This course is the same as Education 7549X [796].

Prerequisite: approval of program head or chairperson.

THEA 7142X Seminar in Theater Criticism

30 hours plus conference; 3 credits
Theater criticism in relation to the dramatic arts. Spring term.

Prerequisite: Theater U7212X [751X] and U7213X [U752X].

THEA 7151X Criticism Workshop

15 hours; 1 credit each term
Research and writing projects designed to strengthen skills in theatrical criticism and dramaturgy.

Prerequisite: permission of the chairperson.

THEA 7152X Criticism Workshop

15 hours; 1 credit each term
Research and writing projects designed to strengthen skills in theatrical criticism and dramaturgy.

Prerequisite: permission of the chairperson.

THEA 7153X Criticism Workshop

15 hours; 1 credit each term
Research and writing projects designed to strengthen skills in theatrical criticism and dramaturgy.

Prerequisite: permission of the chairperson.

THEA 7154X Criticism Workshop

15 hours; 1 credit each term
Research and writing projects designed to strengthen skills in theatrical criticism and dramaturgy.

Prerequisite: permission of the chairperson

Theater history and criticism

THEA 7211X Theater Research and Bibliography

30 hours; 3 credits
Introduction to theater research, bibliography, critical methodology. Fall term.

THEA U7212X History of the Theater to 1642

30 hours plus conference; 3 credits
Survey of methods of production from ancient Greece to the closing of theaters by the Puritan Commonwealth. (Not open to students who have completed Theater [771.1X]). Fall term.

Prerequisite: a course in play production.

THEA U7213X History of the Theater from 1642

30 hours plus conference; 3 credits

Methods of production from the English Restoration to the present including French neoclassicism. (Not open to students who have completed Theater 772.1X.) Spring term.

Prerequisite: a course in play production or Theater U7212X [751X] or 771.1X.

THEA U7221X History of Theatrical Theory and Criticism I

30 hours plus conference; 3 credits
A survey of major theorists and critics concerned with drama and theater, both text and production, from Plato and Aristotle through the German philosophers and critics of the mid-nineteenth century. (Not open to students who have completed Theater [U702X]).

THEA U7222X History of Theatrical Theory and Criticism II

30 hours plus conference; 3 credits
A survey of major theorists and critics concerned with drama and theater, both text and production, from the mid-nineteenth century to the present, including melodrama, farce, theories of dramaturgy, expressionism, epic theater, political theater, and post-structuralism. (Not open to students who have completed Theater [U702X]).

THEA U7223X History of the American Theater

30 hours plus conference; 3 credits
Theater in the United States from colonial times to the present. Its importance as a social and cultural force. Spring term.

THEA U7224X American Musical Theater

45 hours; 3 credits
History of American musical theater from its beginnings through today. Examination of major artists and productions.

THEA 7225X History of Theater in Education

30 hours plus field experience; 3 credits
Twentieth-century history, theory, and practice of theater arts in education. Creative drama. British Theater in Education (TIE) movement. Artist-in-residence programs in the schools and the National Endowment for the Arts (NEA). Aesthetic education. Cultural literacy. Cross-disciplinary applications of arts. Teaching artist and classroom teacher. Standards and certification. Visits to school sites.

Prerequisite: approval of program head or chairperson.

THEA U7231X Studies in Theater History and Production

30 hours plus conference each term; 3 credits each term
History and theory of one of the component arts of the theater: acting, directing, scene design and lighting, theater architecture, stage costumes. Subject is announced in advance and is supervised by a specialist.

THEA U7232X Studies in Theater History and Production

30 hours plus conference each term; 3 credits each term
History and theory of one of the component arts of the theater: acting, directing, scene design and lighting, theater architecture, stage costumes. Subject is announced in advance and is supervised by a specialist.

THEA U7233X Studies in Theater History and Production

30 hours plus conference each term; 3 credits each term
History and theory of one of the component arts of the theater: acting, directing, scene design and lighting, theater architecture, stage costumes. Subject is announced in advance and is supervised by a specialist.

Acting

THEA 7311X Improvisation for the Actor I

60 hours; 3 credits
Training in improvisation techniques for all performance situations based on the work of Keith Johnstone, Augusto Boal, Viola Spolin, and others. Fall term.

Prerequisite: Matriculation for the M.F.A. in theater with a concentration in acting or audition.

THEA 7312X Improvisation for the Actor II

60 hours; 3 credits
Continued advanced work in improvisational techniques and application to specific performance situations. Introduction to neutral and character mask work. Spring term.

Prerequisite: Theater 7311X [720.3X] or permission of the head of the M.F.A. acting concentration.

THEA 7321X Acting I: Acting with Imagination

60 hours; 3 credits
Development of self-awareness, imagination, space, and environment. Working with improvisational exercises, actors will focus on freeing the imagination, spontaneity, and the "art of doing," or actions/objectives and obstacles. They will explore the journey of the play script through scene work, applying techniques from Theater 7360X The Energized Self: Applied Kinetics and Analytic Techniques for the Actor. Fall term.

Prerequisite: matriculation for the M.F.A. in theater with a concentration in acting.
Corequisite: Theater 7360.X The Energized Self: Applied Kinetics and Analytic Techniques for the Actor.

THEA 7322X Acting II: The Actor and the Contemporary Play

60 hours; 3 credits
Acting techniques necessary to bring the text to life through an exploration of contemporary and modern scenes. This course introduces three interrelated components: recognition of events that tell the story, exploration and application of kinesthetic and metaphorical actions that enhance the events of the story, and definition of character through exploration of motives, manners, and behaviors. Spring Term

Prerequisite: Theater 7321X [721.3X] or permission of the head of the M.F.A. acting concentration.

THEA 7323X Acting III: The Actor and the Classic Play I

60 hours; 3 credits
Application of the basic principles of acting studied in Theater 7321X [721.3X] and Theater 7322X [722.3.X] to the work and world of Shakespeare. Advanced scene studies from Shakespeare's comic and tragic plays, focusing on the relationships among thought, language, and action. Fall term.

Prerequisite: Theater 7322X [722.3X] or permission of the head of the M.F.A. acting concentration.

THEA 7324X Acting IV: The Actor and the Play

60 hours; 3 credits
Examination of the tools and techniques an actor requires to work within different modes of theater. Through advanced scene studies from a variety of plays providing contrasting language and periods, actors will apply their skills to tell the story. Spring term.

Prerequisite: Theater 7323X [723.3X] or permission of the head of the M.F.A. acting concentration.

THEA 7325X Acting for the Camera

60 hours; 3 credits
Application of advanced acting skills to the particular techniques required when acting in television and on film. Spring term.

Prerequisite: Theater 7321X [721.3X] and Theater 7322X [722.3X], or permission of the head of the M.F.A. acting concentration.

THEA 7326X Audition Techniques and the Business of Acting

60 hours; 3 credits
The advanced study of the interplay between the practical business aspects of the profession, auditions, and marketing strategies. Focus will be on: the selection and preparation of material suitable to the student's individual strengths; the exploration of the range of acting skills necessary for inventive performance in cold readings; how to gather information on unions, theatres, producing organizations, and useful trade publications; understanding the responsibilities and roles of casting directors, managers, and agents; the importance of a professional head shot and resume. The final sessions of this course will be co-taught with a professional casting director and agent. Spring term.

Prerequisites: Theater 7323X [723.3X], Theater 7343X [732.3X], and Theater 7344X [733.3X]; or permission of the head of concentration.

THEA 7331X Movement for the Actor I

60 hours; 3 credits
Study of the Alexander Technique and its use as a tool for the actor. Application of experiential anatomy to support course material and provide an informed foundation for movement exercises. Sensory awareness, flexibility, and stretching will be developed to allow for greater strength, balance, and physical ease. Exploration of the dynamic variables of movement-time, space, weight, and energy-through improvisational exercises and choreographed phrases. Fall term.

Prerequisite: Matriculation for the M.F.A. in theater with a concentration in acting or audition.

THEA 7332X Movement for the Actor II

60 hours; 3 credits
Study of the relationship of breath, voice, and movement. Development of the ability to recognize and change one's psycho-physical dynamic in any given moment through further study of the Alexander Technique and its application to movement, as well as the spoken word. Continued development of the actor's movement potential through improvisation and choreographed explorations. This course builds directly on Theater 7331X [725.3X]. Spring term.

Prerequisites: Theater 7331X [725.3X] or permission of the head of the M.F.A. acting concentration.

THEA 7333X Movement for the Actor III

60 hours; 3 credits
Application of advanced movement techniques and exercises to further expand the actor's awareness of balancing of physical flexibility and strength in the body. Emphasis is on physical choices that inform character development, period style, and the physical environment of the play.

Prerequisite: Theater 7331X [725.3X] and Theater 7332X [726.3X]; or permission of the head of concentration.

THEA 7334X Movement for the Actor IV

60 hours; 3 credits
Basic unarmed skills –punches, slaps, scratches and simple falls and how to integrate these physical techniques and disciplines into dramatic literature. Presentation before the Society of American Fight Directors (SAFD) Fight Master for skills proficiency recognition in Unarmed Combat. SAFD proficiency test costs $35.

Prerequisite: THEA 7331X, 7332X, 7333X or permission of the concentration head.

THEA 7341X Voice Production for the Actor I

60 hours; 3 credits
Training of the actors' speaking voice. Heightening of the actor's awareness of the integrated connection between body, voice, and emotions. Focus on the development of a responsive and powerful instrument that directly reveals, rather than describes, emotions and thoughts. Understanding and practice of breathing for voice production; awareness of physical holding patterns that inhibit a free, open, and dynamically expressive vocal instrument; practice in releasing such patterns. Fall term.

Prerequisite: Matriculation for the M.F.A. in theater with a concentration in acting or audition.

THEA 7342X Voice Production for the Actor II: Sound and Sense

60 hours; 3 credits
Review of vocal warm-up introduced in Theater 7341X [727.3X]; continuation of focus on awareness of the connection among the body, voice, and spoken word. Study of contrasting poetic texts from a variety of periods to understand the relationship between the sound(s) of the word and the texture, time, space, rhythm, meter, and meaning/sense of words and thoughts. Spring term.

Prerequisites: Theater 7341X [727.3X] or permission of the head of the acting concentration.

THEA 7343X Voice Production for the Actor III: Heightened Text

60 hours; 3 credits
Advanced vocal techniques for integrating voice and body to meet the demands of speaking Shakespeare's heightened language. Attention to the shapes, structures, or "givens" in the text; how to recognize or "read" them as clues that inspire specific acting choices, such as textures of sounds, rhythm, meter, thought structure, the language's physicality, imagery, antithesis, word play, irony, and puns. Fall term.

Prerequisite: Theater 7342X [728.3X] or permission of the head of the M.F.A. acting concentration.

THEA 7344X Voice Production for the Actor IV

60 hours; 3 credits
Advanced vocal techniques that integrate all voice and movement training from the previous three semesters more fully into the acting process: awareness of the body in space, connection with emotional impulses, intentions, and physical actions; skilled use of the dynamically free and expressive voice as a powerful and responsive instrument to reveal, rather than describe, emotions and thoughts. Spring term.

Prerequisites: Theater 7343X [732.3X]; or permission of the head of the M.F.A. acting concentration.

THEA 7345X An Actor's Approach to Shakespeare

60 hours; 3 credits
Examines Shakespearean heightened language and illuminates practical strategies to approach the text as an actor toward developing a clear, comprehensive process that will prepare the graduate actor to perform Shakespearean texts as a professional. Focuses on intense physical and intellectual study of three Shakespearean plays, at least one of which is a comedy.

Prerequisite or Corequisite: THEA 7342X (728.3X)

THEA 7351X Diction and Dialect for the Actor I

60 hours; 3 credits
Development of a flexible speech instrument for the actor. Focus on muscle and sensory awareness through understanding of the anatomy/physiology of the articulators, the physical nature and quality of good American speech sounds, the production of vowel and consonant sounds, and the recognition of speech as a physical process. Study of the International Phonetic Alphabet as applied to physical practice. Fall term.

Prerequisite: matriculation for the M.F.A. in theater with a concentration in acting or audition.

THEA 7352X Diction and Dialect for the Actor II

60 hours; 3 credits
Development of commitment to the word--fulfilling the demands of the text with skill and sensitivity; practice and application of good American speech sounds and the International Phonetic Alphabet to the "heightened text" of poetry, classical drama, and dramatic monologues.

Prerequisite: Theater 7351X [734.3X] or permission of the head of the M.F.A. acting concentration.

THEA 7353X Diction and Dialect for the Actor III

60 hours; 3 credits
Builds on basic diction skills acquired in the first year. Focus on the greater demands of speaking difficult heightened texts, whether classic or modern. Analysis of the structure and meaning of such texts. Emphasis on individual development of a greater command of expression. Development of ease, energy, and precision of articulation. Strong working knowledge of the International Phonetic Alphabet (IPA) and mastery of basic diction skills required.

Prerequisite: Theater 7351X [734.3X] and Theater 7352X [735.3X], or permission of the concentration head.

THEA 7354X Diction and Dialect for the Actor IV

60 hours; 3 credits
Builds upon the speech skills previously aquired. Final semester of speech and dialect training. Focus on the acquisition of mastery in advanced diction and dialect techniques, which are essential to the well-rounded professional actor.

Prerequisite: Theater 7351X [734.3X] and Theater 7352X [735.3X], or permission of the concentration head.

THEA 7360X The Energized Self: Applied Kinetics and Analytic Techniques for the Actor

4 Hours; 3 Credits
In this course students will expand their sensory perception through a practical exploration of kinetics. To complement their expansion of physical awareness and being, students will also explore the journey of the playscript by developing techniques and tools that facilitate script analysis, define character, and clarify the relationship of each character to the spine of the play.

Matriculation for the M.F.A. in Theater with a concentration in acting.

Design and technical theater

THEA 7411X Rendering Techniques for the Stage Designer

45 hours; 3 credits
Media and techniques involved in visual communication of the stage designer. Fall term.

Prerequisite: Theater 7415X [771.4X] or permission of the chairperson.

THEA 7412X Costume-Rendering Techniques

45 hours; 3 credits
Study and application of the methods, techniques, and media used by the costume designer in the realization and presentation of the costume sketch. Fall term.

THEA 7413X Costume Construction for Stage and Screen I

45 hours; 3 credits
Theory and practice of costume construction in performance based media.

THEA 7414X Scene Painting

45 hours; 3 credits
Intensive study of styles of architecture and ornament as applied to scene painting. Traditional and contemporary styles; practices and procedures in scene painting. Application to department productions.

Prerequisite: Theater 7415X [771.4X] or permission of the chairperson

THEA 7415X Stagecraft

30 hours lecture, 30 hours laboratory; 3 credits
Scenic construction equipment and techniques. Shop organization, materials, graphics, rigging and handling procedures, budgeting, lighting equipment maintenance and handling. Participation in department productions as assigned. Spring term.

Prerequisite: an introductory course in the principles and practices of theater production or permission of the chairperson.

THEA 7416X Costume Construction for the Stage and Screen II

45 hours; 3 credits
Continued theory and practice of costume construction in performance based media.

Prerequisite: THEA 7413.

THEA 7417X Costume Construction for the Stage and Screen III

45 hours; 3 credits
Advanced theory and practice of costume construction in performance based media.

Prerequisite: THEA 7413X and 7416X.

THEA 7421X Scenographic Techniques I: Fundamentals

45 hours; 3 credits
Study of fundamental scenographic concepts and execution of all necessary technical drawings used in preparation of scenery and lighting for the theater. Traditional tools and media will be used. Spring term.

Prerequisite: permission of the chairperson.

THEA 7422X Scenographic Techniques II: 2D CADD

45 hours; 3 credits
Study of Computer Assisted 2D Drafting and Design as applied to the disciplines of scenery, lighting, and costume design.

Prerequisite: Theater 7415X [771.4X], 7421X [772.4X], or equivalent; and permission of chairperson

THEA 7423X Scenographic Techniques III: 3D CADD and Rendering

45 hours; 3 credits
Study of Computer Assisted 3D Drafting and Design as applied to the disciplines of scenery, lighting, and costume design.

Prerequisite: Theater 7415X [771.4X], 7421X [772.4X], 7422X [772.8X], or equivalent; and permission of chairperson.

THEA 7431X Scene Design

45 hours; 3 credits
Principles of scenery design and their application to design problems. Fall term.

Prerequisite: Theater 7415X [771.4X] or 7421X [772.4X] or permission of the chairperson.

THEA 7432X Advanced Scene Design

45 hours; 3 credits
Scene design for theater or television. Spring term.

Prerequisite: Theater 7431X [771.5X] or the equivalent; and permission of the chairperson.

THEA 7433X Costume Design

45 hours; 3 credits
Study of contemporary and period costume. Application to department productions. Fall term.

Prerequisite: an introductory course in the principles and practices of theater production.

THEA 7434X Advanced Costume Design

45 hours; 3 credits
Problems in costume design for the theater or television. Production design problems and principles. Application to a specific production. Spring term.

Prerequisite: Theater 7433X [771.6X].

THEA 7435X Lighting Design

45 hours; 3 credits
Principles of lighting design and their application to design problems. Fall term.

Prerequisite: Theater 7415X [771.4X] or the equivalent or permission of the chairperson.

THEA 7436X Advanced Lighting Design

45 hours; 3 credits
Advanced study of lighting design. Spring term.

Prerequisite: Theater 7435X [771.7X] or the equivalent or permission of the chairperson.

THEA 7441X Advanced Studies in Design

45 hours; 3 credits
Application of stage design to a specific production. Projects in scenery, costume, and/or lighting. With prior written permission of the chairperson,students may repeat this course once, in a different area, for credit. Spring term.

Prerequsite:Theater 7432X [772.5X] or 7434X [772.6X] or permission of the chairperson.

THEA 7442X Theater Design and Planning

30 hours plus conference; 3 credits
Study of the design and planning of a functioning theater. Examination of typical theater forms. Aesthetics of theater architecture. Spring term.

Prerequisite: Theater 7431X [771.5X]; and Theater 7611X [773.9X] or 7511X [775.2X].

Directing

THEA 7511X Directing I: Interpretive Fundamentals

Minimum of 60 hours; 3 credits
Text interpretation through the exploration of objectives, actions, obstacles, events, and environments. Fall term.

Prerequisite: permission of the chairperson.

THEA 7512X Directing II: Rehearsal Process and Problems

Minimum of 60 hours; 3 credits
The director's relationship to the actor in the creation of a theater event; establishment of a common language. Culminates in a forty-minute prethesis production. Spring term.

Prerequisite: Theater 7511X [775.2X] or permission of the chairperson.

THEA 7513X Directing III: Interpreting the Classics

Minimum of 60 hours; 3 credits
Advanced study of new and classic texts to be selected and developed as scene study in collaboration with other theater artists. Fall term.

Prerequisite: Theater 7511X [775.2X] and 7512X [776.2X]; or permission of the chairperson.

THEA 7514X Directing IV: Problems in Style

Minimum of 60 hours; 3 credits
Focus on the evolution of the director's personal vision with particular emphasis on visual and aural organization.

Prerequisite: Theater 7511X [775.2X], 7512X [776.2X], and 7513X [777.2X]; or permission of the chairperson.

THEA 7515X Advanced Seminar in Directing

Minimum of 60 hours; 3 credits
Theory and practice of advanced problems in theater directing of classic plays for contemporary audiences; application of theory in rehearsal and performance. Spring term.

Prerequisite: Theater 7511X [775.2X], 7512X [776.2X], and permission of the chairperson.

THEA 7516X Stage and Company Management

45 hours; 3 credits
Professional procedures and practices for the rehearsal, technical preparation, performance and touring of theater, opera, and dance productions.

Prerequisite: permission of the chairperson.

Performing Arts management

THEA 7611X Principles of Performing Arts Administration

45 hours; 3 credits
Introduction to history and methods of producing in the performing arts. Economic and administrative structuring of performing arts companies and institutions. Fall term.

Prerequisite: Permission of the head of the concentration.

THEA 7612X Business Management of the Performing Arts

45 hours; 3 credits
Managerial organization and structuring of contemporary performing arts ventures, companies, institutions. Economics, accounting, budgeting, box office organization and control. Spring term.

Prerequisite: Accounting 7101X and permission of the head of the concentration.

THEA 7613X Promotion and Marketing for the Performing Arts

45 hours; 3 credits
Practical methods for marketing performing arts companies. Spring Term.

Prerequisite: must be taken in the same semester as 7612X [774.9] and permission of the head of the concentration.

THEA 7614X Technology and the Performing Arts

45 hours; 3 credits
Study of current and future performing arts management relationships between technology and the live performing arts; theory, principle, and practice. Computerized business, box office, production systems, cable and other video production, and marketing of live arts events. Fall term.

Prerequisite: permission of the head of the concentration.

THEA 7615X Fundraising for the Performing Arts

30 hours plus conference; 3 credits
In-depth study of the philosophy and methodology of raising contributed income for the professional, nonprofit performing arts institutions. Fall term.

Corequisites: Theater 7621 [778.09] and permission of the head of concentration.

THEA 7616X The Performing Arts and the Law

45 hours; 3 credits
Analysis of legal briefs, contracts, copyright laws, and other legal obligations related to performing arts companies and institutions. Spring term.

Prerequisite: Must be taken in same semester as Theater 7612X [774.9X] and permission of the head of the concentration.

THEA 7617X Labor and Employee Relations in the Performing Arts

45 hours; 3 credits
Labor/management relations in the performing arts; individual and collective bargaining negotiations; federal, state, and local regulations; personnel policies and legal issues. Fall term.

Prerequisite: Theater 7616X [776.9] and permission of the head of the concentration.

THEA 7618X Artistic/Managerial Decision Making in the Performing Arts

30 hours plus conference; 3 credits
Dynamics of planning, organizing, and realizing performing arts projects, ventures, companies, and institutions; interrelationships between artists, managers, and funding sources in the collaborative process of making performances. Spring term.

Prerequisite: permission of the head of concentration.

THEA 7619X Seminar in Performing Arts Management

30 hours plus conference; 3 credits
Study in depth of selected problems related to the management of performing arts organizations using the case study approach, role playing, other discussion methods. Fall term.

Prerequisite: Theater 7612X [774.9X] and permission of the head of the concentration.

THEA 7620X Theater in the Age of Globalization

45 hours; 3 credits
A consideration of the present and future state of theater in the Age of Globalization. How attitudes toward text and performance and the business of theater are changing as technology and international perspectives become more significant. The class includes interviews with members of the theater community engaged in global theater. A substantial final collaborative e-project is required.

THEA 7621X Performing Arts Externship

200 hours of fieldwork per course plus conference to be arranged; 4 credits
Placement with a professional performing arts company or organization for intensive fieldwork; joint supervision by a faculty member and a member of the sponsoring organization. Regular conferences with faculty supervisor; preparation of a written report regarding the externship experience. (Theater 7621X [778.09X] is not open to students who have completed Theater 778.9X.)

Prerequisite: permission of the head of concentration.

THEA 7622X Performing Arts Externship

200 hours of fieldwork per course plus conference to be arranged; 4 credits
Placement with a professional performing arts company or organization for intensive fieldwork; joint supervision by a faculty member and a member of the sponsoring organization. Regular conferences with faculty supervisor; preparation of a written report regarding the externship experience. (Theater 7621X [778.09X] is not open to students who have completed Theater 778.9X.)

Prerequisite: permission of the head of concentration.

THEA 7623X Performing Arts Externship

200 hours of fieldwork per course plus conference to be arranged; 4 credits
Placement with a professional performing arts company or organization for intensive fieldwork; joint supervision by a faculty member and a

member of the sponsoring organization. Regular conferences with faculty supervisor; preparation of a written report regarding the externship experience. (Theater 7621X [778.09X] is not open to students who have completed Theater 778.9X.)

Prerequisite: permission of the head of concentration.

THEA 7631X Professional Residency and Thesis

Minimum of 400 hours of fieldwork plus conference; 6 credits
Full-time work with a professional arts company or organization under joint supervision of a faculty member and a staff member from the sponsoring organization. Written thesis covering the history of the organization, a description of the resident's responsibilities, an evaluation of the residency experience, and an overview of the field as a whole. (Not open to students who are enrolled in or have completed Theater 7742X [778X].)

Prerequisite: permission of the head of the concentration.

Production

THEA 7720X Collaborative Discipline Seminar

15 hours, 1 credit
Exploration, expansion, and application of collaborative practices related to the creative theatre production process. May be repeated 4 times for credit.

Prerequisite: Permission of head of concentration.

Independent studies

THEA 7711X Research Problems in Theater

45 hours; 3 credits
Individual and group study of advanced problems of theater production or history and criticism.

Prerequisite for students concentrating in design/technical: Theater 7432X [772.5X]; and Theater 7442X [773.4X] or the equivalent of the course.
Prerequisite for students concentrating in directing: Theater 7322X [722.3X] and Theater 7512X [776.2X]; Theater 7442X [773.4X] or the equivalent of the course.
Prerequisite for students concentrating in theater history and criticism: Theater U7212X [751X] and 7213X [U752X] and 7142X [773.1X]; or the equivalent of the courses.

THEA 7721X Theater Practicum

Minimum of 60 hours; 3 credits each term
Assigned theater production work and projects, supervised by faculty.

Prerequisite: permission of the head of concentration.

THEA 7722X Theater Practicum

Minimum of 60 hours; 3 credits each term
Assigned theater production work and projects, supervised by faculty.

Prerequisite: permission of the head of concentration.

THEA 7723X Theater Practicum

Minimum of 60 hours; 3 credits each term
Assigned theater production work and projects, supervised by faculty.

Prerequisite: permission of the head of concentration.

THEA 7724X Theater Practicum

Credits 3.0 Hours 3.0
Assigned theater production work and projects, supervised by faculty.

Prerequisite: Permission of the head of concentration.

THEA 7731X Special Problems

45 hours each term; 3 credits each term
Directed study supervised by a faculty member.

Prerequisite: permission of the chairperson.

THEA 7732X Special Problems

45 hours each term; 3 credits each term
Directed study supervised by a faculty member.

Prerequisite: permission of the chairperson.

THEA 7741G Thesis Research

Hours to be arranged; no credit
Research for master's thesis supervised by a faculty member. Degree is not earned until thesis is accepted. Students register for this course only once.

Prerequisite: permission of the chairperson.

THEA 7742X Thesis Production and/or Project

45 hours; 3 credits
Completion of an approved production and/or project with written thesis. (Not open to students who are enrolled in or have completed Theater 7631X [789X].)

Prerequisites: completion of the pre-thesis and permission of the head of the M.F.A. directing concentration.

Women's and Gender Studies

Department office: 1207 Ingersoll Hall
Phone: 718.951.5476

Courses

WGST 7000X Theories of Feminism

45 hours; 3 credits
The construction of knowledge pertaining to women; theoretical aspects of the challenges to traditional thinking about women. The main theories or schools of thought to be studied are liberal, radical, lesbian, socialist, and Third World feminism, as well as feminist perspectives on psychoanalysis and representation.

Inventory of Registered Programs at Brooklyn College

The following graduate degree, advanced certificate and combined undergraduate/graduate degree programs are offered at Brooklyn College. These programs have been approved by the New York State Education Department (SED) and are listed in the Inventory of Registered Programs. The Higher Education General Information Survey (HEGIS) code numbers and the SED program code numbers appear next to the appropriate programs. These codes are distinct from the CUNYfirst class numbers that appear in the *Schedule of Classes* and are used for registration and other internal purposes. Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for certain student aid awards.

HEGIS Code	SED Program Code	Certificate or Program Name	Certificate or Degree(s) Awarded
0502	88398	Accounting	M.S.
1002	02016	Art	M.F.A.
0831	36856	Art Education	Advanced Certificate
1003	02017	Art history	M.A.
0831	26751	Art teacher	M.A.
0808	31638	Autism spectrum disorders	Advanced Certificate
0401	01987	Biology	M.A.
0401.01	26742	Biology teacher	M.A.
0506	01895	Business administration	M.S.
1905	02083	Chemistry	M.A.
1905	35301	Chemistry	M.S.
1905.01	26766	Chemistry teacher	M.A.
1010	36817	Cinema Arts	M.F.A.
1010	36605	Cinema Studies	M.F.A.
1214	21578	Community health (offered with CUNY Graduate School)	M.P.H.
1214	78495	Community health	M.A.
0701	77202	Computer science	M.A.
0799	32771	Parallel and Distributed Computing	Advanced Certificate[?#]
1507	02056	Creative writing (See also English.)	M.F.A.
0823	36844	Early Intervention and Parenting	Advanced Certificate
1914	02091	Earth and Environmental Sciences	M.A.
1914	36028	Earth and Environmental Sciences	M.S.
1917.01	33640	Earth Science Teacher (grades 7–12) (in-service)	M.A.T.
1917.01	33641	Earth Science Teacher (grades 7–12) (pre-service)	M.A.T.
Education* (See also teacher education programs in subject areas.)			
0834	32662, 32663	Adolescence Science Education (grades 7–12)	M.A.T
0899	31826	Bilingual education	Advanced Certificate
0802	26826	Childhood education teacher (grades 1–6)	M.S. in Ed.
	26823	Childhood education teacher (grades 1–6): extension to bilingual education	M.S. in Ed.
0823	26736	Early childhood education teacher (birth–grade 2)	M.S. in Ed.
0828	33411	Educational leadership: School building leader; School district leader	M.S. in Ed.
0811	31828	Gifted education	Advanced Certificate
0804.03	26723	Middle childhood education	M.S. in Ed., specialist:

mathematics (grades 5–9)			
0804.04	26820	Middle childhood education teacher: M.A., general science (grades 5–9)	
0899	36517	Museum Education	Advanced Certificate
0826.02	36488	Play Therapy	Advanced Certificate
0826.01	01846	School counseling	M.S. in Ed.
0826.01	01890	School counseling	Advanced Certificate
0826.02	01998	School psychologist	M.S. in Ed.
0826.02	79597	School psychologist	Advanced Certificate
0808	26726	Teacher of students with disabilities in	M.S. in Ed., early childhood education
0808	26729	Teacher of students with disabilities in	M.S. in Ed., childhood education
0808	31136	Teacher of students with disabilities in	M.S. in Ed., middle childhood education
1501	02044	English (See also Creative writing.)	M.A.
1501.01	26811	English teacher	M.A.
1102	02026	French	M.A.
1102.01	26797	French teacher	M.A.
2104.103	30468	Grief counseling	Advanced Certificate
0799	86190	Health informatics	M.S.
2205	02107	History	M.A.
0702	89058	Information systems	M.S.
0309	79419	Judaic studies	M.A.
1299.30	89178	Exercise and Sport Science	M.S.
0835	26745	Physical Education Teacher	M.S. in Ed.
0835	83153	Sport Management	M.S.
4901	82507	Liberal studies	M.A.?
1701	02063	Mathematics	M.A.?
1701.01	26734	Mathematics teacher (See also Education.)	M.A.
0603	77735	Media Studies	M.S.
1005	02020	Musicology	M.A.
1004.10	88183	Music composition	M.Mus.
1004	88184	Music performance	M.Mus.
1004	36848	Music performance (15 credits)	Advanced Certificate
1004	36849	Music performance (30 credits)	Advanced Certificate
1004	36846	Music performance (15 credits)	Advanced Diploma
1004	36847	Music performance (30 credits)	Advanced Diploma
0832	26816	Music teacher	M.A.
0832	26817	Music education	Advanced Certificate
1306	86173	Nutrition	M.S.
1004	27812	Performance and interactive media arts	Advanced Certificate
1099	31062	Performance and interactive media arts	M.F.A.
1902	02068	Physics	M.A.
1902.01	26762	Physics teacher	M.A.
2207	02108	Political science	M.A.
2002	90064	Experimental psychology	M.A.
2008	90065	Industrial and organizational psychology-human relations	M.A.
2008	90066	Industrial and organizational psychology-organizational, psychology and behavior	M.A.

2104.10	30978	Mental health counseling	M.A.
2201.01	26753	Social studies teacher	M.A.
2208	02110	Sociology	M.A.
1105	02035	Spanish	M.A.
1105.01	26800	Spanish teacher	M.A.
1506	81376	Speech	M.A.[?]
1220	77738	Speech Language Pathology	M.S.
1220	29956	Audiology (program cosponsored by Aud.D., Hunter, Brooklyn, and the CUNY Graduate Center; Graduate Center awards the Aud.D.)	
0603	84002	Television production	M.F.A.
1007	76211	Theater	M.F.A.
1007	04002	Theater	M.A.

* Additional titles for alternative (transition B) certificate programs also appear in the inventory. These specialized programs provide alternative pathways to teacher certification. Consult with the School of Education for further information.

[?] Programs currently not accepting applications.

Addendum

For current tuition rates and fees, please visit the college website, at
http://www.brooklyn.cuny.edu/web/about/offices/bursar/tuition/graduate.php