

THE CITY UNIVERSITY OF NEW YORK

FACULTY COUNCIL

Meeting of 5/8/2012

The Committee on Graduate Curriculum and Degree Requirements herewith submits its recommendations in Curriculum Document 208

SECTION A-III: CHANGES IN DEGREE PROGRAMS	3
SECTION A-IV: NEW COURSES	29
SECTION A-V: CHANGES IN EXISTING COURSES	32
APPENDIX: <i>ERRATA</i>	39

Respectfully submitted,  
Jennifer Ball, Chair – Art  
Isabelle Barriere – Speech  
Carol Connell – Finance and Business Management  
James Cox – Computer and Information Science  
Wen-Song Hwu – Childhood, Bilingual and Special Education

Members of Faculty Council with any questions are urged to contact **Jennifer Ball** at [jball@brooklyn.cuny.edu](mailto:jball@brooklyn.cuny.edu) prior to the meeting.

## TABLE OF CONTENTS

<b>SECTION A-III: CHANGES IN A DEGREE PROGRAM</b>	<b>3</b>
<b>Department of Finance and Business Management</b>	<b>3</b>
<b>Department of Secondary Education (SEED)</b>	<b>5</b>
M.A., M.S. degree program in secondary education and special subjects	5
M.A. Programs in English education	5
M.A. degree program in education: mathematics teacher (7-12)	8
M.A. and M.A.T. Programs in Science Education	10
M.A. Programs in Social Studies	27
<b>SECTION A-IV: NEW COURSES</b>	<b>29</b>
<b>Department of Finance and Business Management</b>	<b>29</b>
<b>Department of Sociology</b>	<b>31</b>
<b>SECTION A-V: CHANGES IN EXISTING COURSES</b>	<b>32</b>
<b>Department of Early Childhood Education and Art Education</b>	<b>32</b>
<b>APPENDIX: ERRATA</b>	<b>39</b>
<b>SECTION A-III: CHANGES IN DEGREE PROGRAMS</b>	<b>39</b>
<b>Department of School Psychology, Counseling and Leadership</b>	<b>39</b>
<b>SECTION A-V: CHANGES IN EXISTING COURSES</b>	<b>40</b>
<b>Department of Secondary Education</b>	<b>40</b>

## **SECTION A-III: CHANGES IN A DEGREE PROGRAM**

### **Department of Finance and Business Management**

#### **M.S. in Business Economics**

**HEGIS code 0517, SED program code 01895**

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

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 Finance and Business Management, Accounting, and Economics Departments. The following courses are required: Economics 7000X, 7010X, 7020X, 7021X, 7025X. Students selecting Option 2 or Option 3 (below) may take either Economics 7000X or Business 7206X. They also take either Economics 7021X or Business 7279X; and either Economics 7025X or Business 7278. 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.

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 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 and Finance.* A minimum of 18 credits (6 courses) from the following: Business 7200X, 7202X, 7204X, 7208X, 7210X, 7216X, 7220X, 7240X, Business 7250X or Psychology 7246G, Business 7255X or Psychology 7247G, Business 7257X, Business 7260X, Business 7278, Business 7279X, Business 7290X, Business 7203X or Television and Radio 7727X, Economics or Business 7215X, Economics or Business 7230X, Economics 7027X, Economics 7028X, Economics7030X, 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 Economics 7215X, Business 7216X, Business 7230X, Business 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.

**Rationale:** Business 7257X is a new course and needs to be included in the requirements.

**Effective date:** Fall 2013

**Date of approval by the department:** April 3, 2010

## **Department of Secondary Education (SEED)**

### **M.A., M.S. degree program in secondary education and special subjects**

See the corresponding academic department section for information regarding specific HEGIS and SED codes

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); physical education (all grades); physics (7-12); social studies (7-12); modern languages (French, Spanish) (grades 7-12). The School of Education also offers two master of arts in teaching (M.A.T.) programs: the M.A.T. in Adolescence Science Education (grades 7-12) and the M.A.T. in Earth Science Teacher (grades 7-12).

The School of 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 departments for further information.

### **M.A. Programs in English education**

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 School of 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 in grades 7-12; 100 hours of fieldwork; 40 days or 300 hours of student teaching of English in grades 7-12, or one year of full-time teaching of English in grades 7-12; and submission of scores on the Liberal Arts and Science Test (L.A.S.T.); or

(b) an undergraduate degree with a major in English, or appropriate coursework in English and submission of L.A.S.T. scores; or

(c) an undergraduate major in English, the L.A.S.T., the 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 chairperson 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.

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

### **Degree requirements**

Thirty to forty-three ~~three~~ 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 equivalent course work and teaching experience 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 Eng 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): ~~43~~ 46 credits

Students who do not possess Initial Certification in teaching English or equivalent course work and teaching experience must complete the following courses in English: English 7507X, English 7010X and English 7011X. In addition, and with advisement from the chairman 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 must also complete the following courses in Education: SEED 7500X, 7501X, 7531T, 7542T, 7514T, 7543T, 7502T, 7671T, 7508T and 7521T.

Option (C): ~~33~~ 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 7507X, English 7010X and English 7011X. In addition, and with advisement from the chairman 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 ED 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 NCTE English standards. Transcript review will determine what appropriate course work students must take.

**Rationale:** The description of the program for English teacher 7-12 has been changed to simplify and clarify the requirements for the different options available to students. Given the restructuring of the School of Education, such that there is now a Department of Secondary Education, and given the new requirements from the Department of Education, specific program descriptions will now fall under the department rather than being listed separately under the School of Education or the Department of Secondary Education.

**Clearances:** Department of English, April 20, 2012

**Date of departmental approval:** March 7, 2012.

**Effective date:** Fall 2012.

**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 School of 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 School of Education section of the Bulletin, and should see the chairperson of the Secondary Education Department ~~head of adolescence education and special subjects~~ 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, as well as a master of arts degree program for middle childhood general science teachers (grades 5-9).

**Matriculation requirements**

Applicants must offer 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.

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

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

(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 mathematics in grades 7-12; 100 hours of fieldwork; 40 days or 300 hours of student teaching of mathematics in grades 7-12, or one year of full-time teaching of mathematics in grades 7-12; and submission of scores on the L.A.S.T.;

(c) an undergraduate degree with an appropriate major or appropriate course work in mathematics, and submission of scores on the Liberal Arts and Science test (L.A.S.T.).

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 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~~ ~~have not completed~~ all of the specific course requirements ~~are~~ will be given individual consideration and may be admitted with conditions, with the approval of the ~~head of adolescence education and special subjects in the School of Education~~ 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. ~~head of adolescence education and special subjects for counseling.~~ General matriculation and admission requirements of the Division of Graduate Studies are in the section "Admission."

### **Degree requirements**

Applicants will enter and complete the program, according to one of three options, depending on her or his 7-12 mathematics teaching certificate at the time of application.

Option 1: For candidates of Transitional B Certification in 7-12 mathematics

A minimum of ~~33~~36 credits is required for the master's degree.

Students must complete ~~33~~36 credits in the following courses: All of the following: Math 7305T ~~or 7517X~~, Math 7307T, Math 7309T or 7311T, and Secondary Education (SEED), ~~7671X, 7672T, 7461T, 7462T, 7463T, 7544T, and 7464T.~~ and 7671X.

~~Students will progress through the course sequence as follows:~~

~~Summer 1: Education 7501X, Analysis of Classroom Interaction and Curriculum 3 credits~~

~~Summer 1: Education 7461T, Methods and Content 7-12: Number Operations and Algebra, 3 credits~~

~~Fall 1: Education 7462T, Methods and Content 7-12: Algebra and Geometry, 3 credits~~  
~~Mathematics—190~~

~~Fall 1: Mathematics 7305T or 7517X, High School Mathematics from an Advanced~~

~~Standpoint or Number Theory, 4 credits~~

~~Spring 1: Education 7463T, Methods and Content 7-12: Probability, Data Analysis and Trigonometry, 3 credits~~

~~Spring 1: Mathematics 7307T, Geometry for High School Mathematics Teachers, 4 credits~~

~~Summer 2: Education 7500X, Perspectives on Education: Teaching Children and Adolescents in a Multicultural Context, 3 credits~~

~~Fall 2: Education 7544T, Advanced Seminar: Pedagogy & Curriculum in Mathematics, 3 credits~~

~~Fall 2: Mathematics 7309T, Theory of Functions for High School Mathematics Teachers, 4 credits~~

~~Spring 2: Education 7464T, Seminar in Applied Theory & Research in Mathematics Education, 3 credits~~

~~Spring 2: Mathematics 7311T, Teaching of Advanced Placement Calculus AB & BC, 4 credits~~

Option 2: For holders of NYS Initial Certification in mathematics

~~A minimum of 30 credits is required for the master's degree.~~ Students must complete 3033 credits in the following courses: All of the following: Math 7305T ~~or 7517X~~, Math 7307T, Math 7309T or 7311T, and Education 7461T, 7462T, 7463T, 7544T, ~~and 7464T,~~ and 7671X. In addition, students will choose one elective from among Secondary Education (SEED) 7671X, 7672T, 7502T, 7684T, 7472X, 7465, or 7503X.

Option 3: For students without NYS Certification in mathematics

~~A minimum of 40 credits is required for the master's degree.~~ Students must complete 4043 credits in the following courses: All of the following: Math 7305T ~~or 7517X~~, Math 7307T, Math 7309T or 7311T, and Education ~~7501X,~~ 7461T, 7462T, 7463T, 7500X, 7544T, ~~and 7464T.~~ In addition, they will complete Secondary Education (SEED) 7501X, 7503X, 7542T, and 7671X.

**Rationale:** The changes are to accommodate changes in New York State guidelines for Fall 2012 that require a stand-alone special education course for all teachers preparing for Initial Certification.

**Clearances:** Department of Mathematics

**Department Approval:** May 8, 2012

**Effective Date:** Fall 2012

### **M.A. and M.A.T. Programs in Science Education**

**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 26821 (options A,B) & 26820 (options C,D)**

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 must submit scores on the Liberal Arts and Science Test (L.A.S.T.). 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 ~~36~~ 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: SEED 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 SEED 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 one of the following elective education courses, or an elective selected from Secondary Education, Childhood 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 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 Education (SEED 7330T) or grades 5-6 for those with Initial Certification in Adolescence Education (SEED 7332T) or mentored teaching in middle childhood for full time teachers.

Option (C): ~~36~~ 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-~~six~~ nine credits are required for the degree.

Students must complete SEED 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: SEED ~~7679T~~, 7340T, 7503T, 7671T, and 15 credits in graduate courses in any of the following: biology, chemistry, physics, earth and environmental science, and general science.

Option (D): ~~33-35~~ 36-38 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-three five credits are required for the degree.

Students must complete SEED 7500X, 7310, ~~7679T~~, 7311T, 7320T, 7503T, 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.

### **Rationale:**

Proposed changes in number of credits for certain options reflect New York State's new requirement that all teachers preparing for Initial Certification must have a stand-alone course in special education. The substitution of Secondary education 7503T for 7679 T in Option C and D under M.A. degree program in middle childhood education (5-9) - general science teacher - specialization in biology, chemistry, physics, or earth science addresses the state requirement of a literacy course.

**Date of departmental approval:** March 7, 2012.

**Effective date:** Fall 2012.

### **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 26821 (options A,B) & 26820 (option C)**

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 submit scores on the Liberal Arts and Science Test (L.A.S.T.).

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: SEED 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 SEED 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): 30credits.

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 SEED 7310T, 7311T, 7320, 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 (SEED 7332T) or grades 5-6 for those with Initial Certification in Adolescence Education (Education 7330T) or mentored teaching in middle childhood for full time teachers.

Option (C): ~~45~~ 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 two credits are required for the degree.

Students must complete SEED 7500X, 7501X, 7310T, and 7311T prior to student teaching, SEED 7330T and 7332T. Students must obtain departmental permission to register for these courses.

In addition to the above, the following courses are required: SEED 7503X, 7671T, and SEED 7340T, 15 credits in graduate courses in: biology, chemistry, physics, earth and environmental science, and general science.

SEED 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.

**Rationale:**

Proposed changes respond to new requirements from the New York State Department of Education requiring all students pursuing Initial Certification to have a stand-alone course in special education.

**Date of departmental approval:** March 7, 2012.

**Effective date:** Fall 2012.

**M.A.T. degree program: earth science teacher (grades 7-12)**

**See the corresponding academic department section for information regarding specific HEGIS and SED codes**

**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 submit scores on the Liberal Arts and Science Test (L.A.S.T.).

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."



### **Degree requirements**

Thirty to thirty-three credits are required for the degree depending on the applicants' previous coursework, teaching experience and the certificates they hold.

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

**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. Twenty-four credits in Earth and Environmental Sciences from among: 7000T, 7006T, 7012T, 7013T, 7040T, 7041T, 7042T, 7044T, 7091T, 7092T, 7093T or any earth and environmental sciences course numbered 7100 or higher. SEED 7340T and one of the following courses: SEED 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 from among: 7000T, 7006T, 7012T, 7013T, 7040T, 7041T, 7042T, 7044T, 7091T, 7092T, 7093T or any earth and environmental sciences course numbered 7100 or higher.

All of the following courses in education: SEED 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 (SEED 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, submission of passing scores on the Liberal Arts and Science test (LAST), and any additional New York State requirements.

**Rationale:** Proposed changes respond to new requirements from the New York State Department of Education requiring all students pursuing Initial Certification to have a stand-alone course in special education.

**Date of departmental approval: March 7, 2012.**

**Effective date: Fall 2012.**

**M.A.T. degree program in adolescence science education (grades 7-12)  
HEGIS code 0834.00 NYS 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 must submit scores or proof of registration for the Liberal Arts and Science Test (LAST). Applicants to concentration A must submit scores on the Content Specialty Test (CST) in the discipline of specialization. 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) require student teaching and is for applicants without state 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 native language is not English or who were educated in a country where English is not the official language must take the Test of English as a Foreign Language (TOEFL) and arrange to have official score reports sent to the Office of Admissions. The minimum acceptable TOEFL score is 500 (or 173 in the computer-based version, or 61 in the Internet-based version). See the section, "Additional admission requirements for students with international credentials," in the Graduate Bulletin for more updated and complete information.

The program of study must be approved by the Head of the program in adolescence science education. All required education courses and some education electives require permission for registration as indicated in the Schedule of Classes. Applicants should note additional requirements found in the sections, "Admission" and "Academic Regulations and Procedures," in the Graduate Bulletin.

**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 SEED 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 for biology teacher, chemistry teacher, earth science teacher, and 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:

SEED 7325X, 7671T, 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 for biology teacher, chemistry teacher, earth science teacher, and 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:

SEED 7325X, 7671T, 7314X, 7320T, 7315X, 7324X, 7321T, 7312T, 7326T, 7542T, 7543T and six (6) elective 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.

**Rationale:** The secondary education program is updating the course prefix to reflect the new departmental structure in the School of Education. The special education changes reflect. In addition, new NYS requirements, "Regulation Changes for All Teacher Education Programs and Restructuring Students with Disabilities", New York State Education Department Revised Guidance, November 5, 2010, compel teacher education programs to have a stand-alone course that focuses on preparing teachers in the content areas to teach students with disabilities. As such we are eliminating the other options and only keeping the required course (SEED 7671).

**M.A. degree program in education: biology teacher (7-12)**

**HEGIS code 0401.01 NYS 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 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.

### **Admission 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) or (c):

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

(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 biology in grades 7-12; 100 hours of fieldwork; 40 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; and submission of scores on the Liberal Arts and Science Test (L.A.S.T.);

(c) an undergraduate degree with a major in biology or appropriate course work in biology, and submission of scores on the L.A.S.T.

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 Head

of the program in adolescence science education in the School of Education and the chairperson of the Biology Department.

Applicants should see the Program Head for counseling.

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 complete 12 credits in courses in 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 9 credits in Group II and 3 credits in Group III, below. 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 the appropriate courses in Group I before taking courses in Groups II and III.

Students pursuing Initial Certification in teaching biology must take SEED 7503X, Teaching Writing Across the Curriculum, and SEED 7671X in Group III.

Students who already have a master's degree but wish Initial Certification in teaching biology must take appropriate courses in Group I and Group III, below, as determined at the time of matriculation by the Head of the program in adolescence science education.

#### Group I:

SEED 7302X, 7501X, 7312T, 7542T, 7326T, 7543T.

#### Group II:

SEED 7502T, 7327T, 7340T.

#### Group III:

SEED 7005X, 7547T, 7671X, 7527T, 7684T, 7545X, 7503X, 7548X/English 7507X, SEED 7913X/ Theater 7141, SEED 7671X, 7038X.

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.

**Rationale:** The secondary education program is updating the course prefix to reflect the new departmental structure in the School of Education.

In addition, new NYS requirements, "Regulation Changes for All Teacher Education Programs and Restructuring Students with Disabilities," New York State Education Department Revised Guidance, November 5, 2010, compel teacher education programs to have a stand-alone course that focuses on preparing teachers in the content areas to teach students with disabilities. This course, SEED 7671, is only required for those teacher candidates seeking certification. It does not represent additional credits for those already with a certification.

**Clearances:** Department of Biology

**Department approval:** April 13, 2012

**Effective date:** Fall 2012

**M.A. degree program in education: chemistry teacher (7-12)**

**HEGIS code 1905.01**

**NYS SED program code 26766**

Students taking 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. 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: general chemistry, including qualitative analysis; a comprehensive course in organic chemistry (may be one or two terms depending on curriculum) one term of physical chemistry; and analytical chemistry.

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

(a) New York State Initial Certification in teaching chemistry grades 7-12;

(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 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; and submission of scores on the Liberal Arts and Science test (L.A.S.T.);

(c) an undergraduate degree with a major in chemistry or appropriate course work in chemistry, and submission of scores on the L.A.S.T.

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) 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 Head of the program in adolescence science education in the School of Education and the chairperson of the Chemistry Department.

Applicants 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 30 credits are required for the degree.

Students must complete one of the following courses: Chemistry 7761G, 7550G, 7571G, 7670G or 7640G.

Students must also complete Chemistry 7450G.

Students must complete an additional 5 credits in graduate courses in Chemistry, for a total of 12 credits in Chemistry.

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 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 9 credits in Group II and 3 credits in Group III, below. 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 the appropriate courses in Group I before taking courses in Groups II and III, below.

Students pursuing Initial Certification in teaching chemistry must take SEED 7503X, Teaching Writing Across the Curriculum, and SEED 7671X in Group III.

Students who already have a master's degree but wish Initial Certification in teaching chemistry must take appropriate courses in Groups I and III, below, as determined at the time of matriculation by the Head of the program in adolescence science education\_in the School of Education.

Group I:

SEED 7302X, 7501X, 7312T, 7542T, 7326T, 7543T.

Group II:

SEED 7502T, 7327T, 7340T.

Group III:

SEED 7005X, 7547T, 7671X, 7527T, 7684T, 7545X, 7503X, 7548X/English 7507X,  
SEED 7913X/ Theater 7141, SEED 7671X, 7038X.

Courses in the Chemistry Department or other science departments and the School of Education offered toward the degree must be 700-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.

**Rationale:** The secondary education program is updating the course prefix to reflect the new departmental structure in the School of Education.

In addition, new NYS requirements, "Regulation Changes for All Teacher Education Programs and Restructuring Students with Disabilities," New York State Education Department Revised Guidance, November 5, 2010, compel teacher education programs to have a stand-alone course that focuses on preparing teachers in the content areas to teach students with disabilities. This course, SEED 7671, is only required for those teacher candidates seeking certification. It does not represent additional credits for those already with a certification.

**Date of departmental approval: March 13, 2012**

**Effective Date of the change: Fall 2012**

**M.A. degree program in education: physics teacher (7-12)**

**HEGIS code 1902.01 NYS 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. All students should consult with 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.



## **Matriculation requirements**

Applicants must offer at least 12 credits in physics beyond general physics.

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

(a) New York State Initial Certification in physics for grades 7-12;

(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 physics in grades 7-12; 100 hours of fieldwork; 40 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; and submission of scores on the L.A.S.T.;

(c) an undergraduate degree with a major in physics or appropriate course work in physics, and submission of scores on the Liberal Arts and Science test (L.A.S.T.).

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 Head of the program in adolescence science education in the School of Education and the chairperson of the Physics Department.

Applicants 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 complete 12 credits in courses in the

School of Education as described below. The remaining credits required for the degree may be in courses taken in any department.

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 9 credits in Group II and 3 credits in Group III, below. 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 the appropriate courses in Group I before taking courses in Groups II and III, below.

Students pursuing Initial Certification in teaching physics must take SEED 7503X, Teaching Writing Across the Curriculum, and SEED 7671X\_in Group III.

Students who already have a master's degree but wish Initial Certification in teaching physics must take appropriate courses in Group I and Group III, below as determined at the time of matriculation by the Head of the program in adolescence science education.

Group I:

SEED 7302X, 7501X, 7312T, 7542T, 7326T, 7543T.

Group II:

SEED 7502T, 7327T, 7340T.

Group III:

SEED 7005X, 7547T, 7671X, 7527T, 7684T, 7545X, 7503X, 7548X/English 7507X, SEED 7913X/ Theater 7141, SEED 7671X, 7038X.

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.

**Rationale:** The secondary education program is updating the course prefix to reflect the new departmental structure in the School of Education. In addition, new NYS requirements, "Regulation Changes for All Teacher Education Programs and Restructuring Students with Disabilities," New York State Education Department Revised Guidance, November 5, 2010, compel teacher education programs to have a stand-alone course that focuses on preparing teachers in the content areas to teach students with disabilities. This course, SEED 7671, is only required for those teacher candidates

seeking certification. It does not represent additional credits for those already with a certification.

**Clearances: Department of Physics**

**Date of departmental approval: March 13, 2012**

**Effective Date of the change: Fall 2012**

**M.A. Programs in Social Studies**

**M.A. Degree Program in Education: Social Studies Teacher (7-12)**

**HEGIS code 2201.01; SED program code 26753**

**(See page 115-117 on the online bulletin)**

**Degree requirements**

A minimum of 30 credits is required for the degree.

Eighteen credits must be chosen from the field(s) of the Social Studies: History, Political Science, Economics, Sociology. Students must 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 7342X, 7352X.

Students must complete a minimum 12 credits in courses in the Secondary Education Department. 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 social studies must complete 9 credits in Group II and 3 credits in Group III, below.

Students who do not possess Initial Certification in teaching social studies or equivalent course work and teaching experience or who are teaching but do not possess Initial Certification in teaching social studies must have the appropriate course work and credits in the subject area and must complete the appropriate courses in Group I before taking courses in Group II and III, below.

Students pursuing Initial Certification in teaching social studies must take Secondary Education 7503X, Teaching Writing Across the Curriculum, in Group III.

Students who already have a master's degree but wish Initial Certification in teaching social studies must take appropriate courses in Group I and Group III, below, as determined at the time of matriculation by the program head of Social Studies Education.

Group I: Secondary Education 7500X, 7501X, 7532T, 7542T, 7515T, 7543. 7671T.

Group II: Secondary Education 7502T, 7509T, 7522T.

Group III: Secondary Education 7507T 7503X.

Students must complete a research project under advisement of a faculty member in Secondary Education 7522T. This project meets the Comprehensive Examination/Thesis requirement for the program.

**Rationale:** Proposed changes reflect the requirement from New York State to have a stand alone course in special education for teachers pursuing Initial Certification. The change in Group III from 7507T to 7503X is a correction of a typo.

**Date of departmental approval:** March 7, 2012.

**Effective date:** Fall 2012

## **SECTION A-IV: NEW COURSES**

### **Department of Finance and Business Management**

#### **Business 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.

**Prerequisite:** None

**Frequency of offering:** Once a year, Spring term

**Projected enrollment:** 25 students per year

**Rationale:** The global workplace requires communication skills sensitive to and aware of the different cultural venues where business is being conducted. Many skills are necessary to succeed in communicating business managerial, marketing, and financial goals for this diverse global workplace. This course focuses on many different aspects of communication in the global business workplace. Cultural global issues are introduced. The use of oral language, written message communication, and nonverbal language as they relate to intercultural communication are discussed. Also, communication approaches are focused upon as it relates to business information, negotiation and conflict resolution, and corporate culture.

The M.S. degree program in Business Economics has as part of its Option 2, the area of study of Global Business and Finance. This course fits in with this area of study as communication skills are necessary for understanding and succeeding in the global workplace. Also, this course addresses the degree program goals that include the following. 1) Students will develop knowledge and understanding of the functional areas of business including Human Resource Management and General Management, as communication skills are important for effective management. 2) Students will develop competency in verbal communication skills related to communication in global business environments. 3) Students will develop the ability to integrate the knowledge from the various functional areas of business and be able to communicate effectively whether for managerial, marketing, or financial topics. Also, this course can be of interest to students from different majors besides those majoring in Business Economics. This can include those pursuing an M.A. in Industrial and Organizational Psychology.

**Clearances:** Department of Speech Communication Arts and Sciences, May 8, 2012

**Date of Approval by the Department:** April 3, 2012

**Effective Date:** Fall 2013

**Department of Sociology****SOCY 7370: Environmental Sociology**

30 hours plus conference, 3 credits

**Bulletin Description**

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.

**Prerequisite: None**

**Frequency of offering:** Every Fall

**Projected enrollment:** 15 students

**Rationale:** Environmental sociology is one of the Department of Sociology's areas of excellence at the undergraduate level, and seeks to provide exposure to this sub-field in its MA program so that the program better represents the areas of expertise of the current roster of faculty.

**Clearances:** Department of Earth and Environmental Science, April 30, 2012

**Date of Departmental Approval:** April 3, 2012

**Effective Date:** Fall 2013

## **SECTION A-V: CHANGES IN EXISTING COURSES**

### **Department of Early Childhood Education and Art Education**

Change in title and course description

#### **From:**

#### **ECAE 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.

Prerequisite: None.

#### **To:**

#### **ECAE 7101T Infant and Child Development in Family, Community, Social, Cultural, and Educational Contexts**

30 hours plus conference; 3 credits

Advanced seminar that focuses on observing, assessing, and understanding 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 children with special needs; 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; educational policies.

Prerequisite: None.

**Rationale:** The early childhood education program is changing the title and description to differentiate this course from the CBSE 7101 course, which currently has the same title and description. Also, these changes better reflect the current changes in the field as well as in the program to better meet the needs of early childhood teacher candidates.

**Date of departmental approval: April 3, 2012**

**Effective date: Fall 2013**



**Department of Early Childhood and Art Education**

Change in title and course description

**From:****ECAE 7104T Environments for 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 settings and instruction, 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.

**To:****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.

**Rationale:** The change in title better reflects focus of the course. These changes better reflect the current changes in the field as well as in the program to better meet the needs of early childhood teacher candidates.

**Date of departmental approval: April 3, 2012**

**Effective date: Fall 2013**

## Department of Early Childhood Education and Art Education

Change in title and course description

### From:

#### **ECAE 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.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

### To:

#### **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 in the content areas. life skills, Teaching strategies and approaches designed to meet the individual and group needs of children and create an inclusive classroom community. Differentiated instruction for of 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.

**Rationale:** These changes better reflect the current changes in the field as well as in the program to better meeting the needs of early childhood teacher candidates.

**Date of departmental approval: April 3, 2012**

**Effective date: Fall 2013**

## Department of Early Childhood Education and Art Education

Change in title and course description

### From:

#### **ECAE 7652T Teaching Young Children with Special Needs through the Arts**

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.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

### To:

#### **ECAE 7652T Teaching Young 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 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.

**Rationale:** The early childhood education program is changing the title and description to differentiate this course from the CBSE 7652 course, which currently has the same title and description. These changes better reflect the current changes in the field as well as in the program to better meet the needs of early childhood teacher candidates.

**Date of departmental approval: April 3, 2012**

**Effective date: Fall 2013**

**Department of Early Childhood Education and Art Education**

Change in title and course description

**From:**

**ECAE 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.

**To:**

**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 multilingual 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 Review of collaborations with other professionals, diverse families, and community organizations along with policy implications.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

**Rationale:** The early childhood education program is changing the title and description to differentiate this course from the CBSE 7663 course, which currently has the same title and description. Also, these changes better reflect changes in the fields of Early Childhood Education, Early Childhood Special Education and second language development. They also better meet the needs of early childhood teacher candidates.

**Date of departmental approval: April 3, 2012**

**Effective date: Fall 2013**

**Department of Early Childhood Education and Art Education**

Change in title and course description

**From:**

**ECAE 7675T The Family and Community of Young Children 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. Focus from birth through 2nd grade. Emphasis on urban, linguistic, and cultural perspectives, resource access, and development of parent-community partnerships. Field experiences in early intervention, early childhood centers and school settings and a variety of community settings.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

**To:**

**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 (including fathers) understand their 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, early intervention programs, early childhood centers and/or school settings and a variety of community settings.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

**Rationale:** The early childhood education program is changing the title and description to differentiate this course from the CBSE 7675 course, which currently has the same title and description. These changes better reflect changes in the field and in the Early Childhood Education programs focus and needs of our students.

**Date of departmental approval: April 3, 2012**

**Effective date: Fall 2013**

## Department of Early Childhood Education and Art Education

Change in title and course description

### From:

#### **ECAE 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.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

### To:

#### **ECAE 7683T Atypical Physical Development in Infants, Toddlers and Young Children: Prevention and Early Intervention**

30 hours plus conference; 3 credits

In-depth knowledge of atypical physical development in infancy and toddlerhood 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, early intervention programs and inclusive early childhood special education classrooms.

Prerequisite: Early Childhood and Art Education 7101T and 7102T or permission of the program head.

**Rationale:** The early childhood education program is changing the title and description to differentiate this course from the CBSE 7673 course, which currently has the same title and description. Also, these changes better reflect the current changes in the field as well as in the program to better meet the needs of early childhood teacher candidates.

**Date of departmental approval: April 3, 2012**

**Effective date: Fall 2013**

**APPENDIX: ERRATA**

*The following items were left out of curriculum document 207 but should be included.*

**SECTION A-III: CHANGES IN DEGREE PROGRAMS****Department of School Psychology, Counseling and Leadership**

Change in degree requirements

**M.S. degree program in education: school counseling**

**HEGIS code 0826.01; SED program code 01846**

**Additional requirements for students in the bilingual specialization:**

- a. all internships in the program must be done in a bilingual setting;
- b. passing scores on the English Language Proficiency Assessment for Non-Classroom Personnel (ELPAN), and on the Target Language Proficiency Assessment (TLPA).

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 must pass a comprehensive examination. Information about requirements for the comprehensive examination is in the section "Academic Regulations and Procedures" of the Brooklyn College Bulletin of Graduate Programs. SPCL 7813.~~  
Counseling Leadership in Urban Schools, a course offered for full and part time students in their final year, will be the capstone course in the program. Students will be expected to develop a portfolio as a culminating project that will be part of the course requirement in SPCL 7813.

**Rationale:** This paragraph was inadvertently left out of Graduate Curriculum Document 207 in which the entire School of Education instituted new prefixes to reflect the new departments.

**Date of Department approval:** March 13, 2012

**Effective Date:** Fall 2012

**SECTION A-V: CHANGES IN EXISTING COURSES****Department of Secondary Education**

Change in department prefix

**FROM:****~~EDUC. 7542T Adolescence Education and Special Subjects: 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: ~~Education~~ 7500X [~~742X~~], ~~792.1X~~, and permission of the head of ~~Adolescence Education and Special Subjects~~ and the chairperson of the major department.

Corequisite: ~~Education~~ 7531T [~~763.01T~~] or 7532T [~~763.02T~~] or 7462T [~~763.03T~~] or 7312T [~~763.04T~~] or 7534T [~~763.11T~~] or 7535T [~~763.13T~~] or 7536T [~~763.16T~~], or 7538T [~~763.17T~~]

**TO:****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, 7501, and permission of the appropriate program head and the chairperson of the major department.

Corequisite: SEED 7531T or 7532T or 7462T or 7312T or 7534T or 7535T

**FROM:****~~EDUC. 7543T Adolescence Education and Special Subjects: 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: ~~Education 7500X [742X], Education 7501X [792.1X]~~ and permission of the ~~head of Adolescence Education and Special Subjects~~ and the chairperson of the major department.

Prerequisite or corequisite: ~~Education 7531T [763.01T] or 7532T [763.02T] or 7462T [763.03T] or 7312T [763.04T] or 7534T [763.11T] or 7535T [763.13T] or 7536T [763.16T] or 7538T [763.17T], and Education 7542T [764.5T].~~

Corequisite: ~~Education 7514T [723.01T] or 7515T [723.02T] or 7470T [723.03T] or 7326T [723.04T] or 7516T [723.11] or 7517T [723.13T] or 7518T [723.16T] or 7520T [723.17T].~~

**TO:**

**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

**FROM:**

**EDUC 7544 T 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 ~~Education 7500X [742X], 7501X [792.1X], 7462T [763.03T], 7542T [764.5T], 7470T [723.03T], and 7543T [764.51T]~~ or equivalents.

Prerequisite or corequisite: ~~Education 7502T [742.2T]~~.

**TO:**

**SEED 7544 T Advanced Seminar in Pedagogy and Curriculum Middle Childhood and Adolescence Education: Mathematics**

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.

**Rationale:** The secondary education program updated the course prefixes for all of their course to reflect the new departmental structure in the school of Education in Graduate Curriculum document 207. These three were inadvertently left off that document.

**Date of departmental approval:** March 7, 2012

**Effective date:** Fall 2012