The Committee on Undergraduate Curriculum and Degree Requirements herewith submits its recommendations in Curriculum Document 385.

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Respectfully submitted,

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Members of Faculty Council with any questions are urged to contact Douglas Cohen at dcohen@brooklyn.cuny.edu or (718) 951-5945 prior to the meeting.
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SECTION A-III: CHANGES IN DEGREE PROGRAMS
Department of Business Management

B.S. degree program in business management
HEGIS Code 0506, SED Program Code 85067

Department requirements (48 – 53 credits)

Admission to Program

In order to declare a major in this program, a student must have completed at least 32 credits at Brooklyn College with a grade point average of 2.20 or better. Students who enter Brooklyn College after earning at least 28 credits elsewhere, may declare a major in this program after earning at least 15 credits at Brooklyn College with a grade point average of 2.20 or better.

Majors must complete the following course requirements:

Business Core
All of the following: Economics 2100 or Business 2100; Economics 2200 or Business 2200; Economics 3410 or Business 3410 or Business 3421 or Computer and Information Science 2590 or Mathematics 1201; Business 3400 or Economics 3400 or Mathematics 2501 or Mathematics 3501 or Psychology 3400; Business 3430 or Computer and Information Science 2531; Business 3200; Business 3100; Finance [Business] 3310; Accounting 2001; Accounting 3201; Philosophy 3314; Computer and Information Science 1050 or Computer and Information Science 1110.

Business Electives
Three additional electives in business not used to satisfy the Business Core or Capstone Seminar requirement.
To satisfy this requirement, students may take:
(a) any three courses with a business prefix, or
(b) one or two courses with a different prefix if crosslisted with a business course (for example, Computer and Information Science 1590 which is crosslisted with Business 3420), or
(c) The following courses may also be used to satisfy the business electives requirement: Accounting 3001, 3041, 3051, 3101, 4201, Computer and Information Science 3820, Economics 3202, 3342, 3352, 3362, Mathematics 2601, Psychology 3171.

Capstone Seminar
One of the following seminars: Business 4000W, or Business 4100W, or Business 4101W, or Business 4200W, or Business 4202W or Computer and Information Science 1580W, or Finance [Business] 4300W

Writing-Intensive Requirement: Students are required to take at least one writing-intensive course (W course).

Residence Requirement: At least 21 credits of the above courses, including the required capstone seminar course, must be completed at Brooklyn College.
Index Requirement: Attainment of an overall grade point average of 2.00 in all courses taken to satisfy department requirements. This does not mean that a student must earn a grade of C or better in every single course; it is the overall GPA in the major that matters

Rationale:
Add Business 3421 or Computer and Information Science 2590 as a choice to the business core. Both are the same course topics and are cross-listed. Students could take either Business 3421 or Computer and Information Science 2590 or Business 3410 or Economics 3410 or Mathematics 1201.

1. This proposed additional option of Business 3421 / Computer and Information Science 2590 in the Business Core is relevant to the college mission to “provide an outstanding educational experience for our students.” and is also relevant to the college mission “to offer outstanding academic majors ……in business with effective pathways to graduate education, professional education, and career opportunities.” Offering additional relevant choices is in the direction of the college mission. This proposed additional option is relevant to the Business Management programmatic mission as Business 3421 / Computer and Information Science 2590 is a course that involves quantitative reasoning which is an important area of focus for the Business Management department.

2. The context for the proposed additional option of Business 3421 / Computer and Information Science 2590 is that the current quantitative courses of Business 3410 or Economics 3410 or Mathematics 1201 are all theoretical quantitative courses. The department wants to provide the choice for students of an applied quantitative course.

3. The course objectives of Business 3421 / Computer and Information Science 2590 support program goals for improving quantitative reasoning as the course objectives are aligned with that goal.

4. The elective of Business 3421 / Computer and Information Science 2590 is now shifted to an elevated level of a choice in the business core rather than just being a possible general elective.

5. Course objectives for Business 3421 / Computer and Information Science 2590 include a) providing quantitative insights into real-work phenomena through the analysis of data; b) formulating context-relevant questions that lead to actionable outcomes, and c) developing a strong understanding of current analytics applications and keeping pace with changes in the field. These course objectives are all relevant to the department goal of improving quantitative reasoning.

6. Three programmatic goals: 1) assess student course interest, 2) assess grade distribution of courses, and 3) assess gender distribution of courses.

7. A) Our programmatic three year cycle goals are:
   Year 1: Obtain the number of students who take Business 3421 / Computer and Information Science 2590
   Year 2: Obtain the grade distribution for the Business 3421 / Computer and Information Science 2590 courses
   Year 3: Obtain the gender distribution for the Business 3421 / Computer and Information Science 2590 courses

B) The process to obtain the information is that the college will be contacted to provide the necessary data for our goals.

C) Surveys were conducted in February 2017 from 4 seminar courses taken by undergraduate seniors to determine student opinion about this proposal to provide an additional option of Business 3421 / Computer and Information Science 2590 to the business core. Of the 86 student responses, 87.2% (n=75) indicated yes while only 12.8% (n=11) indicated no.
D) Close the loop process. Faculty will review the obtained data to decide if they are satisfied with the performance on each of these three goals. If all is well, we will continue with the current curriculum approach. If it is determined that it is not going well, faculty will meet to discuss revising the curriculum.

**Date of departmental approval:** February 14, 2017

**Effective date:** Fall 2017
SECTION A-III: CHANGES IN DEGREE PROGRAMS
Department of Early Childhood Education and Art Education

B.A. degree program for early childhood education teacher (birth-grade 2)

HEGIS code 0823; SED program code 26737

Early childhood education is a writing-intensive major program.

Program requirements (79-80 credits)

Completion of the B.A. degree with a major in early childhood education qualifies students to apply for New York State initial teacher certification (birth through grade 2).

To obtain New York State initial teacher certification in early childhood education all required State examinations must be passed. Students majoring in the early childhood education teacher program must be exempt from the speech course requirement.

In addition to fulfilling the CUNY Pathways requirements, students must complete a liberal arts and sciences concentration (30 credits) or have a second major. Specific requirements apply for each concentration and major. Students should consult separate listings for the following departments and meet with an adviser in the Early Childhood Education and Art Education Department: American studies; anthropology and archaeology; art; children and youth studies; classics; English; general science; health and nutrition sciences; history; Judaic studies; mathematics; modern languages and literatures (including Chinese, French, Italian, Russian, Spanish); music; philosophy; political science; psychology; Puerto Rican and Latino studies; sociology; theater; urban sustainability; women's and gender studies. (Additional concentrations and majors may be offered).

Students must also complete the following courses and their co-requisites and pre-requisites, with a C or higher: Psychology 3240 or Health and Nutrition Sciences 2170; Speech 1114; Mathematics 1021 or and Math 1010, [see note after this paragraph; C- is acceptable for Mathematics 1021 or 1010], MATH Mathematics 1401, or a mathematics course at an equivalent level such as Mathematics 1201 or higher, and, Mathematics 1406; and General Science 3050 (16-17 credits).

Note: Students who register for Mathematics 1010 must also register for Mathematics 1021 in the same semester, but students may take Mathematics 1021 without Mathematics 1010. It is recommended required that students take both Mathematics 1010 and Mathematics 1021 concurrently.

In addition, students must complete the following pedagogical courses: Early Childhood and Art Education 2003, 2004, 3101, 3102, 3103, 3104, 3105, 3106, 3107, 3108, and 4001 (33 credits).

Each Early Childhood and Art Education course must be completed with a grade of C or higher and a grade point average of 2.80 or higher in liberal arts and sciences courses.

Material located with strike-through is to be deleted and material underlined is to be added
To be accepted into the early childhood education program, a student must have met the following requirements:
1. Completed English 1010 and 1012, with a C or better.
2. Completed at least 40 credits in liberal arts and sciences courses with a GPA of 2.80 or higher.
3. Passed the ECAE department Math proficiency exam with a score of 80% or higher (pre-requisite for Math 1401) and passed the department Literacy exam.
4. Immunizations must be up-to-date.
5. DOI and/or DOE Finger printing must be completed and cleared.

To continue as a matriculated undergraduate EC student, the following NYS exams are required at the specified transition points:
1. Passed the Educating All Students (EAS) at the end of ECAE 3102 and 3108.
2. Passed the CST Multiple Subject-EC exams one semester prior to student teaching (we recommend students take the 3 different sections of the exam in this sequence: CST Arts & Sciences at the end of ECAE 3105; CST-EC Literacy at the end of ECAE 3104; and CST-EC Math at the end of Math 1406).

To be accepted into student-teaching in the dual early childhood/teaching students with disabilities in early childhood (ECAE 4001), a student must have met the following requirements:
1. Completed all required Early Childhood and Art Education courses with a grade point average of 3.00 or higher.
2. Completed at least 60 credits in liberal arts and sciences courses and concentration courses with a grade point average of 2.80 or higher.

Note: A student who received a grade lower than a B in student-teaching must apply to the ECAE chairperson for permission to reregister for student-teaching. Students will be allowed to repeat an ECAE course (including student teaching) only once.

Throughout student-teaching, students complete and submit their final NYS certification exam, the Teacher Performance Assessment (EdTPA), which involves submitting video clips of teaching, lesson plans, and commentaries on planning, instruction and assessment.

Students not seeking certification must schedule a meeting with the Undergraduate Early Childhood Advisor or Undergraduate EC Coordinator to set up an alternative transition point plan during their initial semester.

**Rationale:**
The Department of Early Childhood and Art Education (ECAE), in conjunction with Department of Mathematics, proposes to change its department requirement for Math 1021 from C to C- in order to align with the passing grade of C- within the Department of Mathematics. In addition we are proposing that Math1010, which provides an enhancement of problem-solving skills taught in Math 1021 with the use of manipulatives and technology, be added to the degree requirement in order to further promote ECAE students’ mathematics foundation for teaching.

**Clearance:** Department of Mathematics

**Date of departmental approval:** February 14th, 2017

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Effective date: Fall 2017
SECTION A-III: CHANGES IN DEGREE PROGRAMS
Department of Early Childhood Education and Art Education

Dual certification for early childhood education teacher & teaching students with disabilities in early childhood
HEGIS code 0823; SED program code 27988

The dual early childhood education/teaching students with disabilities in early childhood education is a writing-intensive major program.

Program Requirements (89-90 credits)

Completion of the B.A. degree with a dual major in early childhood education/teaching students with disabilities in early childhood, which includes the additional requirements in early childhood special education, qualifies students to apply for New York State initial teacher certification (birth through grade 2).

To obtain New York State initial teacher certification in dual early childhood education/teaching students with disabilities in early childhood, all New York State exams must be passed. Students majoring in the dual certification for early childhood education teacher and teaching students with disabilities in early childhood must be exempt from the speech course requirement.

In addition to fulfilling the CUNY Pathways requirements, students must complete a liberal arts and sciences concentration (30 credits) or have a second major. Specific requirements apply for each concentration and major. Students should consult separate listings for the following departments and meet with an adviser in the Early Childhood Education and Art Education Department: American studies; anthropology and archaeology; art; children and youth studies; classics; English; general science; health and nutrition sciences; history; Judaic studies; mathematics; modern languages and literatures (including Chinese, French, Italian, Russian, Spanish); music; philosophy; political science; psychology; Puerto Rican and Latino studies; sociology; theater; urban sustainability; women's and gender studies. (Additional concentrations and majors may be offered).

Students must also complete the following courses and their co-requisites and pre-requisites, with a C or higher: Psychology 3240 or Health and Nutrition Sciences 2170; Speech 1114; Mathematics 1021 or and Math 1010, [see note after this paragraph; C- is acceptable for Math 1021 or 1010], MATH 1401, or a mathematics course at an equivalent level such as Mathematics 1201 or higher, and, Mathematics 1406; and General Science 3050 (16-17 credits).

Note: Students who register for Mathematics 1040 must also register for Mathematics 1021 in the same semester, but students may take Mathematics 1021 without Mathematics 1040. It is recommended required that students take both Mathematics 1010 and Mathematics 1021 concurrently.

Material located with strike-through is to be deleted and material underlined is to be added
In addition, students must complete the following pedagogical courses: Early Childhood and Art Education 2003, 2004, 3101, 3102, 3103, 3104, 3105, 3106, 3107, 3108, 3109, 4020 and 4001 (43 credits).

Students wishing to obtain dual certification for early childhood education teacher and teaching students with disabilities in early childhood must complete Early Childhood and Art Education 3108, 3109, 4020 and their prerequisites as well as 75 hours of field experiences in settings for students with disabilities in early childhood education and 300 hours of student teaching in inclusive early childhood settings.

Each Early Childhood and Art Education course must be completed with a grade of C or higher and a grade point average of 2.80 or higher in liberal arts and sciences courses must be maintained.

To be accepted into the Dual certification program for early childhood education and teaching students with disabilities in early childhood, a student must have met the following requirements: 1. Completed English 1010 and 1012, with a C or better. 2. Completed at least 40 credits in liberal arts and sciences courses with a GPA of 2.80 or higher. 3. Passed the ECAE department Math Proficiency Exam with a score of 80% or higher (pre-requisite for Math 1401) and passed the department Literacy exam. 4. Immunizations must be up-to-date. 5. DOI and/or DOE finger printing must be completed and cleared.

To continue as a matriculated undergraduate EC student, the following NYS exams are required at the specified transition points: 1. Passed the Educating All Students (EAS) at the end of ECAE 3102 and 3108. 2. Passed the CST Multiple Subject-EC exams one semester prior to student teaching (we recommend students take the 3 different sections of the exam in this sequence: CST Arts & Sciences at the end of ECAE 3105; CST-EC Literacy at the end of ECAE 3104; and CST-EC Math at the end of Math 1406). 3. Passed the CST students with disabilities exam at the end of ECAE 3109 and 4020.

To be accepted into student-teaching in the dual early childhood/teaching students with disabilities in early childhood (ECAE 4001), a student must have met the following requirements: 1. Completed all required Early Childhood and Art Education courses with a grade point average of 3.00 or higher. 2. Completed at least 60 credits in liberal arts and sciences courses and concentration courses with a grade point average of 2.80 or higher.

Note: A student who received a grade lower than a B in student-teaching must apply to the ECAE chairperson for permission to reregister for student-teaching. Students will be allowed to repeat an ECAE course (including student teaching) only once. Throughout student-teaching, students complete and submit their final NYS certification exam, the Teacher Performance Assessment (EdTPA), which involves submitting video clips of teaching, lesson plans, and commentaries on planning, instruction and assessment. Students not seeking certification must schedule a meeting with the Undergraduate Early Childhood Advisor or Undergraduate EC Coordinator to set up an alternative transition point plan during their initial semester.
**Rationale:** The Department of Early Childhood and Art Education (ECAE), in conjunction with Department of Mathematics, proposes to change its department requirement for Math 1021 from C to C- in order to align with the passing grade of C- within the Department of Mathematics. In addition we are proposing that Math1010, which provides an enhancement of problem-solving skills taught in Math 1021 with the use of manipulatives and technology, be added to the degree requirement in order to further promote ECAE students' mathematics foundation for teaching.

**Clearance:** Department of Mathematics

**Date of departmental approval:** February 14th, 2017

**Effective date:** Fall 2017
SECTION A-III: CHANGES IN DEGREE PROGRAMS
Department of Earth and Environmental Sciences

B.A. degree program in adolescence education: earth science teacher
HEGIS code 1917.01; SED program code 32681

The Department of Secondary Education and the Department of Earth and Environmental Sciences jointly offer a program for students who plan to teach earth science in grades 7 through 12. Additional information may be obtained from the Department of Secondary Education or the Department of Earth and Environmental Sciences. Adolescence education (grades 7-12) and special subject programs are writing intensive. Students should consult a counselor as early as possible to plan their program. This program is writing intensive.

Program requirements (71-76 67-71.5 credits)

All of the following:
a) Earth and environmental sciences 1101, 1201, 2200W, 2300, 3000, 3100, 3350, 3650, 3850, 3900.
b) Chemistry 1100 or its equivalent.
c) Mathematics 1201 or 1501, or Earth and Environmental Sciences 3800.
d) One of the following courses in physics: Physics 1100 or 1150, or Core Curriculum 1331, or Physics 1331 or Earth and Environmental Sciences 3200.
e) One of the following courses in biology: Biology 1001 or 1080, or Core Curriculum 1321 or Biology 1010.

Students must complete 26 credits in the Department of Secondary Education as specified below.
a) Secondary Education 2001, 2002, 3401, 3402 and 3456. These courses may be started in the lower-sophomore term, or upper-sophomore term.
b) Secondary Education 4480. This course may be taken in the junior year.
c) Secondary Education 4481, 4482, 4483, and 4484 in the senior year. Students must have successfully completed Secondary Education 4480 before taking any of these courses.

The two student teaching field courses, Secondary Education 4482 and 4484, may be taken in the same semester.

Secondary Education 4404 is course equivalent to all of Secondary Education 4480, 4481, and 4482.

Secondary Education 4410 is course equivalent to all of Secondary Education 4480, 4483, and 4484.

Degree programs in Secondary Education include a major in an appropriate department of the college.

Material located with strike-through is to be deleted and material underlined is to be added.
Completion of an adolescence education program as part of a major one of the sciences qualifies students for New York State initial certification in adolescence education in that science content area for grades 7 through 12.

Students qualifying for the initial certification in adolescence science education may obtain an extension to teach the sciences in grades 5 and 6 by taking Secondary Education 3454.

Admission requirements and academic standing

Students must have a GPA of 2.70 or higher based on a minimum of 30 credits in liberal arts and sciences to take Secondary Education 2001.

Students must have a B- in both Secondary Education 2001 and 2002 and a GPA of 2.75 or higher based on a minimum of 30 credits in liberal arts and sciences to continue to Secondary Education 3401, and/or Secondary Education 3402, and/or Secondary Education 3456.

Students who wish to register for student teaching seminar and field placement will need to file an application with the science education program head for permission. See program office for details.

To take Secondary Education 4480, students must have an overall GPA of 2.75 or higher and the permission of the Secondary Education science education program head, department chair, or deputy;

To take either Secondary Education 4481, 4482, 4483, and/or 4484, students must earn a B+ or higher in Secondary Education 4480, a GPA of 2.75 or higher in their major, and the permission of the Secondary Education science education program head, department chair, or deputy.

A student who takes either Secondary Education 4481 and/or 4482 prior to Secondary Education 4483 and/or 4484 must earn a B or better grade in Secondary Education 4481 and/or 4482 before taking either Secondary Education 4483 or 4484.

A student who takes either Secondary Education 4483 and/or 4484 prior to Secondary Education 4481 and/or 4482 must earn a B or better grade in Secondary Education 4483 and/or 4484 before taking either Secondary Education 4481 or 4482.

**Rationale:** Inclusion of EESC 3650 (Environmental Geochemistry) in this program was an error; the intended course requirement was EESC 3100 (Introduction to Geochemistry). The curriculum of this program is based on the Earth Science curriculum defined by the State of New York. A fundamental geochemistry course, as it applies to rocks, minerals, and general Earth processes is mandated by the state. Environmental science is not part of the state’s official Earth science curriculum, and so EESC 3350 with its emphasis on low temperature aqueous geochemistry and biogeochemistry is a mismatch with the curriculum that these teachers in training will have to address in their high-school classrooms. The change in program credits corrects the total credit load.

**Clearance:** Secondary Education

**Date of departmental approval:** February 14, 2017

Material located with strike-through is to be deleted and material *underlined* is to be added
Effective date: Fall 2017
SECTION A-III: CHANGES IN DEGREE PROGRAMS
Department of Earth and Environmental Sciences

B.S. degree program in Earth and Environmental Sciences
HEGIS code 1914; SED program code 02092

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Department requirements (58.5-60 64.5-66 credits)
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All of the following:

a) Earth and Environmental Sciences 1101, 1201, 2100, 2200W, 2300, 2500, 3100, 3350, 3620, 3675, 3600, 3750, 3850, 3855.
b) At least nine eighteen elective additional credits from the following list of courses: any Earth and Environmental Sciences courses numbered 4500 2000 or above, and which may include up to six credits from the following:
   Anthropology 2402, 3440, 3470, 3480, 3250.
   Biology 3003, 3082, 3083, 4003, 4080.
   Chemistry 2500, 2700, 3410, 3420, 3510 or both 3511 and 3512, 4610.
   Health and Nutrition Sciences 2130.
   Physics 3500, 4200.
c) One of the following capstone courses: Earth and Environmental Sciences 3850 or 3855.
d) Chemistry 1040, 1100 or its equivalent.
e) Mathematics 1201.
f) Mathematics 1206 or Computer and Information Science 1110 or Earth and environmental sciences and Environmental Sciences 3800.
g) Biology 1001 or Physics 1100 or its equivalent or 1150.

All required earth and environmental sciences courses numbered 1500 or higher must be completed with a grade of C- or higher in each course.

All required earth and environmental sciences courses numbered 4500 2000 or higher must be completed with a grade of C- or higher in each course. **A college-wide minimum of 24 credits in advanced courses in Earth and Environmental Science must be completed at Brooklyn College.**

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Additional requirements for a B.S. degree
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Candidates for a B.S. degree with a major in earth and environmental sciences must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the Earth and Environmental Sciences Department. These 24 credits must be completed at Brooklyn College with a grade of C- or higher in each course. Specific course requirements for a B.S. degree are described above.

The following courses may be applied toward the 60 credits in science and mathematics:
A) All courses in the departments of biology, chemistry, computer and information science, earth and environmental sciences, mathematics, physics and psychology.
B) Courses marked with a number sign (#) in the Department of Health and Nutrition Sciences.
C) Anthropology and Archaeology 2200, 3199, 3230, 3240, 3250, 3260, 3265, 3266, 3425, 3440, 3470, 4665.
   - Core Studies 5, 6.1, 6.2, 7.1, 7.2, 8.1, 8.2.
D) Core Curriculum [1300 through 1399] and 3301 through 3399.
   - Math 1311, Biology 1010, Chemistry 1007, Physics 1331, Earth and Environmental Sciences 1010.
   - Core Curriculum and 3301 through 3399
E) Economics 3400, 4410, 4410, 4422.
F) Philosophy 3203, 3204, 3231, 3232, 3422, 3423, 3601, 3605, 3610.
G) Kinesiology 3023, 3271, 3275, 3281, 3285, 4229, 4251.
H) Sociology 2701.

Rationale: In the past two years the Department of Earth and Environmental Sciences has added four new faculty members. Three of these new hires are environmental scientists who were brought on to build capacity at Brooklyn College for initiatives recently undertaken by CUNY, and to make our campus a destination for urban and environmental education. The specializations of the faculty in our department are now equally distributed between the Earth Sciences and the Environmental Sciences; however, our curriculum is still heavily weighted toward the Earth Sciences. Our ultimate priority is to ensure that our students are competitively positioned for their postgraduate careers. The EES therefore redesigned its undergraduate program to offer our students the breadth of a unified foundational curriculum in the Earth AND Environmental Sciences, unique in the CUNY system. There is also a need to provide students with the opportunity to acquire sufficient depth through targeted electives that are aligned with their chosen discipline-specific graduate education and/or professional career paths. It was thus necessary that we increase the number of required credits for our program from 58.5- 60 to 64.5 -66. This credit load is in keeping with other Brooklyn College B.S. programs (i.e. Chemistry and Physics required 69-72.5 and 66 credits, respectively). As an example of this need for additional credits, the New York State Education Department amended Article 145 of the Education Law to establish and define the practice of the profession of geology. In order for our program to be accredited for the certification of professional geologists, our curriculum must meet a set of guidelines established in July 2016 by offering specific electives. The proposed changes to our BS program, along with the increase in the number required courses, will allow for this state certification. Similarly, graduates of our program wishing to enter the environmental science workforce require specific course requirements that can be met with the proposed changes to our program. Finally, for those students choosing to pursue post baccalaureate degrees, these curriculum changes will allow them the flexibility to ensure they're able to meet the admission requirements for Earth or Environmental graduate programs.

Date of departmental approval: November 8, 2016

Effective date: Fall 2017

Material located with strike-through is to be deleted and material underlined is to be added
SECTION A-III: CHANGES IN DEGREE PROGRAMS
Department of Kinesiology

B.S. degree program in adolescence education: physical education teacher (all grades)
HEGIS code 0835; SED program code 26746

Undergraduate Physical Education Teacher Education candidates are required to take a number of pedagogical courses and a wide range of sport and physical activity courses in addition to theoretical and exercise science classes. In their senior year, they must complete student teaching with experiences at both the elementary school and secondary school levels. In collaboration with the Departments of Secondary Education and Childhood and Special Education, the program is designed in cooperation with the liberal arts and sciences faculties and in consultation with local schools so that our students may develop the knowledge and proficiencies needed to work with New York City's racially, ethnically, and linguistically diverse student population. Graduates of our physical education teacher education program are assistant principals in many of the public schools in Brooklyn and make up a large percentage of the faculty in the borough's physical education departments.

Undergraduate Physical Education Teacher Education candidates are required to take courses in the following areas: skills & practice teaching physical activities and fitness, teaching methods, foundations of education, anatomy & physiology and exercise science classes that emphasize health and human movement. In the early senior year, student complete comprehensive field experiences and in the final semester, must complete student teaching with experiences at both elementary school and secondary levels. The program is designed in collaboration with the Departments of Secondary Education and Childhood, Bilingual and Special Education, and in cooperation with the liberal arts and sciences faculties. Community partnerships with local schools and other organizations support our students developing the knowledge and proficiencies needed to work with New York City's racially, ethnically, and linguistically diverse student populations. Graduates of our physical education teacher education program make up a large percentage of the faculty in Brooklyn’s physical education departments.

Students must have a minimum overall grade point average of 2.5 to declare a major in Physical Education - Teacher Education. Students must maintain a minimum overall grade point average of 2.5 2.75 to remain a major in the program. Physical Education - Teacher Education majors must have a grade point average of 3.0 or greater in required Department of Kinesiology coursework to graduate. Physical Education Teacher Education majors must also meet all Education requirements to register for Education classes and to be admitted as a Teacher Education candidate. See requirements for details.

Adolescence education (grades 7-12) and special subject programs are writing intensive.

This program reflects changes in teacher certification requirements recently implemented by the New York State Education Department. Degree programs in adolescence education and in special subjects include a major in an appropriate department of the college. Completion of a special subjects program as part of a major in physical education qualifies students to apply for New York State initial certification in special subjects – physical education for all grades (K-12).

Program Requirements (76-78 credits)

Material located with strike-through is to be deleted and material underlined is to be added
Kinesiology 1120#, 2500, 3000, 3005, 3010, 3020, 3030, 3040, 3050, 3060, 3080@, 3001, 3105, 3110, 3116, 3150, 3281, 3285, 3290, 3295, 3404, 3402, 4004, 4200W, 4250, 4410, 4412.

Secondary EducationSEED 2001 or Childhood, Bilingual and Special EducationCBSE 2001.
Secondary EducationSEED 2002 or Childhood, Bilingual and Special EducationCBSE 2002.
Secondary Education 3401
Secondary Education 3456

# Competency in swimming
Competency may be demonstrated by any of the following:
(i) Completion of Kinesiology 1120 Swimming
(ii) Successful completion of the departmental swimming test. Consult the department office for details and dates.
(iii) Current Red Cross certification as Lifeguard or Water Safety Instructor

% Physical Education Teacher Education students enrolled in Kinesiology 3000 will secure fingerprint clearance needed for field work in program classes.

@Students must complete Kinesiology 3080, Field Experience in Physical Education as early as possible after declaring their major. Must be completed prior to Student Teaching.

@Students must have a tk20 – e-folio account for submission of Student teaching materials in Kinesiology 4410 and 4412.

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Admission requirements and academic standing for Teacher Education
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Students must have a GPA of 2.50 2.75 or higher based on a minimum of 30 credits in liberal arts and sciences to take: Kinesiology 3401 or 3402 or Secondary Education 2001 and 2002/Childhood and Special Education 2001 and 2002; an average of 2.75 in Secondary Education 2001 and 2002/Childhood and Special Education 2001 and 2002 is required to continue to Kinesiology 3401 and/or 3402; to take Kinesiology 4412, students must have an overall GPA of 2.75 or higher and permission of the Chairperson or designee of the Department of Kinesiology.
Secondary EducationSEED 2001 or Childhood, Bilingual and Special EducationCBSE 2001.
Secondary EducationSEED 2002 or Childhood, Bilingual and Special EducationCBSE 2002.
Secondary Education 3401.
Secondary Education 3456.
Kinesiology 3402.
Kinesiology 4410 and 4412

Upon exit from the program, candidates will qualify to participate in the NYS directed certification process including EAS, ALST and CST exams and the edtpa portfolio.

Rationale:
Students in our program will benefit significantly being permitted to practice preparing the video and audio components and the copious documentation required for certification early in the program. The revised program seeks to start the teacher development process in early
coursework creating opportunities to demonstrate and practice required knowledge, skills and
dispositions needed to meet NYS and national accreditation standards well ahead of student
teaching. Expectations are that early skill development will not only prepare our student for a
high level of success with edTPA evaluators but will also
• help candidates develop the confidence and skills they need to be successful in diverse, urban schools.
• measure candidate ability to differentiate instruction for diverse learners, including English language learners and special education students in physical education settings.

Program goals will be assessed using exit exam data including EAS, ALST, CST and scores on the State required portfolio, edtpa.

Department Mission Statement
To offer quality instruction, practice scholarly theoretical and practical research, and provide exemplary service to the communities of Brooklyn College, our neighbors in Brooklyn, and associated professional organizations. We provide high quality education in accordance with accepted national and regional standards to prepare certified teachers of physical education; to provide the theoretical and practical skills necessary for exercise science students to become American College of Sports Medicine (ACSM) certified and/or registered professionals; to provide a strong and appropriate undergraduate base, including undergraduate prerequisite classes for students interested in entering the allied health professions; and to provide services enhancing fitness and wellness for the College community and beyond.

Program Goals:
1. To develop candidates who know about and apply discipline specific scientific and theoretical concepts to the development of physically educated individuals
2. To develop candidates who have the knowledge and skills needed to demonstrate and direct competent movement performance and health enhancing fitness
3. To develop candidates who can design and implement developmentally appropriate learning experiences addressing standards and the diverse needs of all students.
4. To develop candidates who use effective communication and pedagogical skills and strategies to deliver and manage instruction.
5. To develop candidates who utilize grade appropriate assessments and practice reflection to inform instructional practice and who are disposed to becoming effective professionals.

Clearance: Secondary Education

Date of departmental approval: November 8, 2016

Effective date: Fall 2017
SECTION A-III: CHANGES IN DEGREE PROGRAMS  
Department of Kinesiology

B.S. degree program in exercise science  
HEGIS code 1299.30; SED program code 32345

Students in Exercise Science have many opportunities for practical hands-on experience with laboratory equipment and in testing and measuring in our human performance labs. This focus area provides a strong background for individuals preparing for graduate work in exercise physiology, medicine, physical and occupational therapy, or to become a physician's assistant, or enter other health-related professions.

Students should consult with a pre-health professions advisor to ascertain specific courses necessary to meet the requirements for the particular specialty in which they are interested.

Individuals completing the exercise science program will also meet many of the educational eligibility requirements of the American College of Sports Medicine for certification as a Health Fitness Specialist and/or Clinical Exercise Specialist, and many of the educational eligibility requirements of the National Strength and Conditioning Association for certification as a Certified Personal Trainer (NSCA-CPT) and Certified Strength and Conditioning Specialist (CSCS).

The Exercise Science major offers two tracks. The Fitness Professional Track provides a strong background in exercise testing and exercise training. As such, graduates should be well prepared to enter the fields of fitness and wellness and will also have completed most of the prerequisite courses for various Health Related Professions (e.g., Physical Therapy). The Pre-Health Professions Track is designed for students who intend to enroll in programs to become Health Related Professionals such as Physical Therapists, Occupational Therapists and Physicians Assistants. Although designed to provide the requirements for applying to such programs, the admissions requirements for programs vary and additional classes may be required depending on the chosen career path and institution. Students should consult with the College Health Professions Advisor as well as with advisors from the schools where they intend to apply to ascertain if additional coursework is needed.

Students must have a minimum overall grade point average of 2.5 to declare a major in Exercise Science. Students must maintain a minimum overall grade point average of 2.5 to remain a major in the program. Exercise Science majors must have a grade point average of 3.0 or greater in required Department of Kinesiology coursework to graduate.

Degree Requirements (7364-69 credits)

All of the following:  
Kinesiology 2500, 3000, 3005, 3060, 3150, 3281, 3285, 3290, 3295, 4200W, 4250, 4260, 4400, 4402, 4500, 4510, 4520, 4760 (60 credits).  
Health and Nutrition Sciences 1200 (3 credits).  
Chemistry 1100 or both 1050 and 2050 (5 credits).  
Physics 1100 (5 credits).

Material located with strike-through is to be deleted and material underlined is to be added
Fitness Professional Track (64-67.5 credits)
All of the following:
Kinesiology 3000, 3005, 3281, 3285, 3290, 4200W, 4250, 4400, 4402, 4500, 4510, 4520, 4760 (48 credits).
Business 3400 or Economics 3400 or Mathematics 2501 or Psychology 3400 or Political Science 3422 (3 or 4 credits).
Health and Nutrition Sciences 1200 (3 credits).
Chemistry 1100 or both 1050 and 2050 (5 or 7.5 credits).
Physics 1100 (5 credits).

Pre-Health Professions Track (68-69 credits)
All of the following:
Kinesiology 3000, 3005, 3281, 3285, 3295, 4200W, 4760 (30 credits).
Health and Nutrition Sciences 1200 (3 credits).
Chemistry 1100 and 2100 (10 credits).
Physics 1100 and 2100 (10 credits).
Biology 1001 and 1002 (9 credits).
Business 3400 or Economics 3400 or Mathematics 2501 or Psychology 3400 or Political Science 3422 (3 or 4 credits).
Psychology 1000 (3 credits).

Rationale:
A significant number of Departmental majors intend to pursue careers in the Health Related Professions. Of these, a majority indicate interest in Physical Therapy with Occupational Therapy and Physician Assistant also attracting interest. The Department's Mission Statement includes a directive “...to provide a strong and appropriate undergraduate base, including relevant undergraduate prerequisite classes, for those interested in entering the health related professions...”. The new Pre-Health Professions Track clearly aligns with that goal and the goals articulated in the Brooklyn College Mission Statement of “...providing access to outstanding undergraduate and graduate programs in the arts and sciences... to develop knowledgeable students who are engaged in the life of the college and our community, and are prepared to think critically, lead responsibly, act ethically, and contribute globally.” With the urgent need for highly skilled Health Care Professionals we believe this track will be of great service to New York City and the Nation as a whole.

The Fitness Professional track will continue the Department’s longstanding commitment to providing highly trained fitness and wellness professionals in line with the Department’s Mission Statement goal “...to provide the theoretical and practical skills necessary for exercise science students to become American College of Sports Medicine (ACSM) certified and/or registered professionals...”. American College of Sports Medicine certification is viewed worldwide as the “gold standard” in the areas of Fitness, Wellness and Clinical Exercise Physiology.

Date of departmental approval: September 9, 2016
Effective date: Fall 2017

Material located with strike-through is to be deleted and material underlined is to be added
SECTION A-III: CHANGES IN DEGREE PROGRAMS
Department of Philosophy

B.A. degree program in philosophy
HEGIS code 1509; SED program code 02057

Philosophy is a writing-intensive major.

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Department requirements (25-38 credits)
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Option I: Philosophy
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Recommended for students planning graduate study in philosophy and for others for whom a broad background in philosophy is desirable.

The department Chair, with the approval of the chair of the department's curriculum committee, may allow substitutions for one or more course requirements, consistent with the educational goals of our program.

All of the following: Philosophy 3111, 3121, 3320, 3401, 3410. Philosophy 3203 or 3204.

One additional Philosophy Department course numbered Philosophy 3101, or higher.

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Option II: Philosophy and Law
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Recommended for students planning careers involving public affairs, law, or planning and management.

The department Chair, with the approval of the chair of the department's curriculum committee, may allow substitutions for one or more course requirements, consistent with the educational goals of our program.

All of the following: Philosophy 3105, 3320, 3410, 3703, 3704, 3740. Philosophy 3203 or 3210. One of the following: Philosophy 3306 through 3317 or 3720.

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Option III: Philosophy and Other Fields
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Recommended for students planning careers in medicine, cognitive science, the arts, and for other students interested in acquiring a knowledge of philosophy that also contributes to the understanding of another field.

The department Chair, with the approval of the chair of the department's curriculum committee, may allow substitutions for one or more course requirements, consistent with the educational goals of our program.

Material located with strike-through is to be deleted and material underlined is to be added
Students must satisfy A, B, and C below.
A. One course from each of the following groups, (1), (2), (3), and (4): (1) Philosophy 3111 or 3121. 
   (2) Philosophy 3203 or 3204 or 3210 or 3232. 
   (3) Philosophy 3320 or 3501 or 3704. 
   (4) Philosophy 3401 or 3410 or 3420.

B. Three courses: One course from each of the following groups, (1), (2), and (3) below. The course chosen from each group may not be used to satisfy any of the above Option III-A requirements or any other Option III-B requirement.
   (1) One course chosen from Philosophy 3215 through 3239 or 3320 through 3331 or 3401 through 3429 or 3501 through 3799 or 3130 or 3805.
   (2) One course chosen from Philosophy 3101 through 3199 or 3620 through 3629 or 3502 or 3703.
   (3) One course chosen from Philosophy 3301 through 3317 or 3422 or 3520 or 3720 or 3805.

C. One of the following, (1) or (2) or (3) or (4) below:
   (1) At least 12 credits in courses taken in a single department or program outside the Philosophy Department.
   (2) At least 12 credits in any selection of the following science courses: Biology 1001, 1002; Chemistry 1040, 1050, 1100, 2050, 2100, 2500, 3510, 3520; Health and Nutrition Sciences 2109 or 2130; Physics 1100, 1111, 1112, 1150, 1190, 2100, 2150.
   (3) A Minor in Cognitive Science or a Minor in Global Studies or a Minor in Corporate Social Responsibility. (Philosophy courses taken to complete a minor in cognitive science or to complete a minor in global studies or to complete a minor in corporate social responsibility can also be applied towards the satisfaction of Option III-A and Option III-B requirements for a major in philosophy.)
   (4) A Minor in Philosophy and the Arts, or a Minor in Philosophy and the Sciences, or a Minor in Philosophy, Culture and the Social Sciences, or a Minor in Professional and Applied Ethics, or a Minor in Logic, Reasoning and Rationality. (Philosophy courses taken to complete a minor in philosophy and the arts, or to complete a minor in philosophy and the sciences, or to complete a minor in philosophy, culture and the social sciences or to complete a minor in professional and applied ethics, or to complete a minor in logic, reasoning and rationality can also be applied towards the satisfaction of the above Option III-A and Option III-B requirements for a major in philosophy.)

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Option IV: Philosophy and Business
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Recommended for students planning careers in business.

The department Chair, with the approval of the chair of the department's curriculum committee,
may allow substitutions for one or more course requirements, consistent with the educational goals of our program.

Programs and Courses of Instruction

Philosophy 3314 and 3320.

One course from each of the following groups, A), B), C), D), and E).

The course chosen from each group may not be used to satisfy any other Option IV requirement.

A) Philosophy 3203 or 3210.

B) Philosophy 3401, 3410, 3422, or 3530.

C) Philosophy 3123, 3130, 3141, or 3703.

D) Philosophy 3704 or 3740.

E) Philosophy 3305 through 3317, or 3145, or 3720.

One of the following groups, either Marketing/Management or Finance:

- Marketing/Management: All of the following: Business 3240 or Psychology 3172; Business 3100, 3130, 3200.

- Finance: Accounting 2001 and either Business 3400 or Economics 3400. Two of the following: Economics 3320, Business 3310 or 3330.

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Option V: Philosophy Honors
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The department Chair, with the approval of the chair of the department’s curriculum committee, may allow substitutions for one or more course requirements, consistent with the educational goals of our program.

Students must satisfy A, B, C and D below.

A. All of the following: Philosophy 3111, 3121, 3320. One of: Philosophy 3203 or 3204. One of: Philosophy 3401 or 3410.

B. One course chosen from group (1), and one course chosen from group (2). The course chosen from each group may not be used to satisfy any of the above Option V-A requirements or any other Option V-B requirement. (1) One of: Philosophy 3215, 3220, 3401 through 3429, 3530, 3601, 3610, 3611, 3621; and (2) One of: Philosophy 3111 through 3159, 3501, 3512, 3702, 3703, 3704, 3730, 3740.

C. A student must complete at least one of the following seminars with honors credit and with a grade of B or higher: Philosophy 4105 or 4110 or 5101 or 5102 or 5110 or 5111.

Material located with strike-through is to be deleted and material underlined is to be added
D. A student must have an academic index of 3.50 or higher in philosophy courses taken to satisfy the major.

**Rationale:**
Since the last update to our major Option III bulletin description, we added a course (PHIL 3331: Happiness and the Meaning of Life) that was assigned a number that falls outside of the appropriate range of courses for one component of the major Option III, as listed in the bulletin. We are seeking to extend the number range to correct for that oversight.

**Date of departmental approval:** November 8, 2016

**Effective date:** Fall 2017
SECTION A-III: CHANGES IN DEGREE PROGRAMS
Department of Secondary Education

B.A. degree program in adolescence education: biology teacher
HEGIS code 0401.01; SED program code 26814

The Department of Secondary Education and the Department of Biology jointly offer a program for students who plan to teach biology in grades 7 through 12. Additional information may be obtained from the Department of Secondary Education or the Department of Biology. Adolescence education (grades 7-12) and special subject programs are writing intensive. Students should consult a counselor as early as possible to plan their program.

This program is writing intensive.

To enroll in any of the following courses—Biology 1002, 2002 or 2002W, and 3004—students must have completed the appropriate pre-or co-requisite courses with a grade of C- or better. A student with a grade of D+ or lower in any biology course applied toward fulfillment of department requirements must repeat the course until the grade of C- or higher is earned, or offer another course of equal or higher rank. Any substitution of courses must be approved by the chairperson or deputy chair for advising. At least one course taken must be a writing intensive (W) course offered by the Department of Biology. Students who completed Biology 1080 and 1081 before fall 2010 may substitute them for Biology 1001 and 1002 in all degree requirements.

Program requirements (69.71-75.5 credits)

All of the following: Biology 1001, 1002, 3003, 3004, 3006 or 3007W, 3011;
At least 6 credits of the following: Biology 2001, 2002 or 2002W, 2010, 2020 or Psychology 2610, Biology 3020 or Psychology 3610, Biology 3030W, 3083, 4001, 4002, 4010W or Computer and Information Science 2810, Biology 4011, 4012, 4013, 4015, 4016, 4019, 4020, 4021, 4022, Biology 4024W, Biology 4025, Biology 4026, Biology 4026, Biology 4026, Biology 4027, 5000W or 5001 or 5003W or 5010 or 5014W, Biology 5020, Chemistry 4581.

One of the following chemistry sequences, a), b), c), or d):

a) Chemistry 1100 (or both 1050 and 2050) and 2500.
b) Chemistry 1100 (or both 1050 and 2050), and 2100, and 3510 (or both 3511 and 3512).
c) Chemistry 1100 (or both 1050 and 2050), 2100, 3510 (or both 3511 and 3512), and 3520 (or both 3521 and 3522).
d) Chemistry 1100 (or both 1050 and 2050), and 2100 and 2500.

One of the following courses in Physics: Physics 1100, or 1111, or 1112, or 1150, or 1331, or Core Curriculum 1331.

Three credits in [Geology 1332] Geology or EESC 1332 or [Core Curriculum 1332] Earth and Environmental Sciences.

Mathematics 1201 or Psychology 3400.

Material located with strike-through is to be deleted and material underlined is to be added
Students who anticipate majoring in biology teaching must see a departmental adviser in both the biology and education departments before the end of their freshman year in order to plan their programs.

Students must complete 26 credits in the Department of Secondary Education as specified below.

a) Secondary Education 2001, 2002, 3401, 3402 and 3456. These courses may be started in the lower-sophomore term, or upper-sophomore term.

b) Secondary Education 4480. This course may be taken in the junior year.

c) Secondary Education 4481, 4482, 4483, and 4484 in the senior year. Students must have successfully completed Secondary Education 4480 before taking any of these courses.

The two student teaching field courses, Secondary Education 4482 and 4484, may be taken in the same semester.

Secondary Education 4404 is course equivalent to all of Secondary Education 4480, 4481, and 4482.

Secondary Education 4410 is course equivalent to all of Secondary Education 4480, 4483, and 4484.

Degree programs in Secondary Education include a major in an appropriate department of the college. Completion of an adolescence education program as part of a major one of the sciences qualifies students for New York State initial certification in adolescence education in that science content area for grades 7 through 12.

Students qualifying for the initial certification in adolescence science education may obtain an extension to teach the sciences in grades 5 and 6 by taking Secondary Education 3454.

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Admission requirements and academic standing
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Students must have a GPA of 2.70 or higher based on a minimum of 30 credits in liberal arts and sciences to take any of these courses: Secondary Education 2001, 2002, 3401 or 3402;

Students must have a B- in both Secondary Education 2001 and 2002 and a GPA of 2.75 or higher based on a minimum of 30 credits in liberal arts and sciences to continue to Secondary Education 3401, and/or Secondary Education 3402, and/or Secondary Education 3456.

Students who wish to register for student teaching seminar and field placement will need to file an application with the science education program head for permission. See program office for details.

To take Secondary Education 4480, students must have an overall GPA of 2.75 or higher, and have the permission of the Secondary Education science education program head, department chair, or deputy;

Material located with strike-through is to be deleted and material underlined is to be added.
To take either Secondary Education 4481, 4482, 4483, and/or 4484, students must earn a B+ or higher in Secondary Education 4480, 3401 and 3402, have a GPA of 2.75 or higher in their major, and have the permission of the Secondary Education science education program head, department chair, or deputy.

A student who takes either Secondary Education 4481 and/or 4482 prior to Secondary Education 4483 and/or 4484 must earn a B or better grade in Secondary Education 4481 and/or 4482 before taking either Secondary Education 4483 or 4484.

A student who takes either Secondary Education 4483 and/or 4484 prior to Secondary Education 4481 and/or 4482 must earn a B or better grade in Secondary Education 4483 and/or 4484 before taking either Secondary Education 4481 or 4482.

Additional requirements for a B.A. degree

Candidates for a B.A. degree with a biology teacher major must complete at least 18 credits in advanced courses in the Department of Biology or allowed electives in other departments as described above (not including Biology 1071 and 1072 or Biology 1001). These 18 credits must be completed with a grade of C- or higher in each course, and 10 or more credits must be completed at Brooklyn College. Specific course requirements for a B.A. degree are described above.

Rationale:
The biology course changes reflect similar changes by the Biology Department to their Biology BA major requirements. The change is minimum credits reflects an increase in number of course credits (from 2 to 3 credits each) for both Biology 3003 and Biology 3006.

The requirement for geology is being revised so that students may take any 3 credits in geology or EESC without a specific course requirement. The requirement is meant to meet national SPA requirements for science teachers.

Clearance: Biology

Date of departmental approval: April 12, 2016

Effective date: Fall 2017
SECTION A-IV: NEW COURSES
Department of Kinesiology

KINS 4004 Principles and Practices of Coaching and Officiating

3 hours; 3 credits

Provides an overview of the professions of athletic coaching and officiating; Addresses the numerous roles coaches and officials play in the educational environment, ethical behavior of participants, safety, teaching, successful organization and administration of competition, and evaluation of performances. Students develop an educationally sound philosophy of coaching. Emphasis on learning and understanding the principles and guidelines of good coaching; Topics such as organizational patterns, objectives of sport programs, controls, game management, records, conduct of tournaments, officials, awards, and means of promoting the programs are considered. Study is made of competitive as well as informal recreation programs on all educational levels. Students are introduced to the art and professional requirements of officiating intramural and athletic contests. Course examines the basic elements of sports officiating including interpretations of rules and regulations and provides students with opportunities to fulfill the role of officials in a variety of sports.

Prerequisite: Kinesiology 3000, 3030, 3040.

Contact hours: 3

Frequency of offering: 2 per year in Fall & Spring Semesters

Projected enrollment: 25 students per semester

Clearance: None

Rationale:
Students in Physical Education Teacher Education are often interested in adding coaching skills to their professional repertoire. In that sport and athletic programs are often integral components of schools and other educational settings, the knowledge, skills, and dispositions provided by a comprehensive course such as KINS 4XXX represent valuable learning and inherent increase in a student’s capacity to serve students in K-12 settings. Alongside the instructional aspects of coaching are the contests that ensue as teams develop and seek competitive venues to test their skills. Whether it is at a recreational, intramural or interscholastic level, coaches need to be familiar with officiating to orchestrate fair, legitimate, rule-based and well run contests.

The priority of any competent physical educator is to operate a program that emphasizes safety. In addition to establishing a safe environment, it is critical that injury prevention be a part of the general instructional process. Students need exposure to principles that address activity in heat and cold, the importance of warm-ups and cool downs, stretching, nutrition, and recognizing early stages of injury. Included in this course is a basic addressing of immediate care procedures for minor injuries that often occur in physical activity settings.

Date of departmental approval: November 8, 2016
Effective date: Fall 2017
SECTION A-IV: NEW COURSES
Department of Sociology

SOCY 3506 Mapping Social Data

3 hours; 3 credits

The objectives of the course are to acquaint students with methods to analyze spatially-referenced data with the procedures appropriate for a sociological theoretical base. Topics include coverage of essential theoretical concepts, the visualization of social data in Geographic Information Systems (GIS), techniques to construct or analyze social point, line, and polygon data using exploratory and confirmatory spatially-centered analytical approaches.

Prerequisite: Sociology 1101.

Contact hours: 3

Frequency of offering: Every other semester

Projected enrollment: 1 section of 25 students

Clearance: None

Rationale:
This course builds on the current course offerings in the Sociology Department by adding an opportunity for students to extend their application sociologically-relevant theoretical frameworks to the area of analyzing social data spatially. This will occur through the introduction of approaches to the acquisition, management, and analysis of spatially referenced social data within the context of a macro-sociological examination of the reasons and consequences associated with the physical organization of populations in space.

Date of departmental approval: September 6, 2016

Effective date: Fall 2017
SECTION A-VI: OTHER CHANGES
Department of Biology

Change in Neuroscience minor

Minor in Neuroscience

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Program requirements: (18-21 credits)
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Interdisciplinary minor, offered by the departments of Psychology and Biology, requiring 18-21 credits including 12 advanced credits, each completed with a grade of C- or higher. At least nine of the advanced credits must be completed at Brooklyn College.

All courses listed in Group A may be used to satisfy the requirements of both the minor in Neuroscience and the major in Psychology. Only one course from Group B may be used to satisfy the requirements of both the minor in Neuroscience and the major in Psychology. Psychology 3600 and one of the courses from Group B may be used to satisfy the requirements of both the minor in Neuroscience and the minor in Psychology. It is also highly recommended to take Biology 1001 and Biology 1002.

Students who do not major in psychology are strongly encouraged to also take Psychology 3400 or Mathematics 4501.

Both A and B below are required:

A. All of the following:
   Psychology 2600 Mind, Brain, and Behavior;
   Psychology 2610 Neurobiology/Biology 2020 Neurobiology;
   Psychology 3600 Behavioral Neuroscience

B. Three of the following:
   Psychology 3510 Learning;
   Psychology 3610/Biology 3020 Behavioral Neuroendocrinology;
   Psychology 3660 Drugs and Behavior;
   Psychology 3670 Comparative Psychology;
   Psychology 3680 Human Neuropsychology;
   Psychology 4690 Special Topics in Biopsychology (cross-listed with Biology 5020); requires approval of the Chair of Psychology or Biology.

Note that the prerequisite for Psychology 2600 is one of the following: Psychology 1 or Psychology 1000 or Psychology 4019 or Health and Nutrition Sciences 2300 or Kinesiology 3271. Therefore, students who otherwise would not take any of these courses will have to complete 21 credits for the minor.

Rationale:
The Interdisciplinary Minor in Neuroscience has grown, with regard to student interest and enrollment, since its inception. This growth has been accompanied by an increased need for

Material located with strike-through is to be deleted and material underlined is to be added
advanced elective course offerings within the Minor. PSYC 3510 Learning is an existing course within Psychology that is well positioned to serve as one such additional advanced elective (Criterion B), towards fulfilling the minor requirements. This course examines many of the behavioral paradigms and underlying psychobiological mechanisms involved in the study of learning and memory processes that are intensively studied in contemporary behavioral neuroscience research. Therefore, PSYC 3510 Learning is added as an Advanced Elective under Criterion B. In addition, Bulletin text is updated to reflect the correct course numbering and course Departments (i.e., “Psychology 1” is redundant with “Psychology 1000”; “Psychology 4019” does not exist; and “Physical Education 3271” should read “Kinesiology 3271”). In addition, a recommendation to take Biology 1001 and 1002 (General Biology 1 and 2) will serve to provide additional background in Biology.

Date of departmental approval: December 6, 2016

Effective Date: Fall 2017
SECTION A-VI: OTHER CHANGES  
Department of Psychology  
Change in Neuroscience minor  

Minor in Neuroscience

Program requirements: (18-21 credits)

Interdisciplinary minor, offered by the departments of Psychology and Biology, requiring 18-21 credits including 12 advanced credits, each completed with a grade of C- or higher. At least nine of the advanced credits must be completed at Brooklyn College.

All courses listed in Group A may be used to satisfy the requirements of both the minor in Neuroscience and the major in Psychology. Only one course from Group B may be used to satisfy the requirements of both the minor in Neuroscience and the major in Psychology. Psychology 3600 and one of the courses from Group B may be used to satisfy the requirements of both the minor in Neuroscience and the minor in Psychology. It is also highly recommended to take Biology 1001 and Biology 1002.

Students who do not major in psychology are strongly encouraged to also take Psychology 3400 or Mathematics 4501.

Both A and B below are required:

A. All of the following:  
Psychology 2600 Mind, Brain, and Behavior;  
Psychology 2610 Neurobiology/Biology 2020 Neurobiology;  
Psychology 3600 Behavioral Neuroscience

B. Three of the following:  
Psychology 3510 Learning;  
Psychology 3610/Biology 3020 Behavioral Neuroendocrinology;  
Psychology 3660 Drugs and Behavior;  
Psychology 3670 Comparative Psychology;  
Psychology 3680 Human Neuropsychology;  
Psychology 4690 Special Topics in Biopsychology (cross-listed with Biology 5020); requires approval of the Chair of Psychology or Biology.

Note that the prerequisite for Psychology 2600 is one of the following: Psychology 1 or Psychology 1000 or Psychology 4019 or Health and Nutrition Sciences 2300 or Kinesiology 3271. Therefore, students who otherwise would not take any of these courses will have to complete 21 credits for the minor.

Rationale:  
The Interdisciplinary Minor in Neuroscience has grown, with regard to student interest and enrollment, since its inception. This growth has been accompanied by an increased need for

Material located with strike-through is to be deleted and material underlined is to be added.
advanced elective course offerings within the Minor. PSYC 3510 Learning is an existing course within Psychology that is well positioned to serve as one such additional advanced elective (Criterion B), towards fulfilling the minor requirements. This course examines many of the behavioral paradigms and underlying psychobiological mechanisms involved in the study of learning and memory processes that are intensively studied in contemporary behavioral neuroscience research. Therefore, PSYC 3510 Learning is added as an Advanced Elective under Criterion B. In addition, Bulletin text is updated to reflect the correct course numbering and course Departments (i.e., “Psychology 1” is redundant with “Psychology 1000”; “Psychology 4019” does not exist; and “Physical Education 3271” should read “Kinesiology 3271”). In addition, a recommendation to take Biology 1001 and 1002 (General Biology 1 and 2) will serve to provide additional background in Biology.

**Date of departmental approval:** November 8, 2016

**Effective Date:** Fall 2017
APPENDIX

Special Topics: The committee has approved the following special topics for the term indicated and informed the Provost of the committee’s approval. These items do not require Faculty Council action and are announced here for information only.

*The Special Topics listed below are second offerings in Fall 2017:*

CHST 2200 Special Topics: Issues in Children’s Studies: *Parenting & Gender*

WGST 3550 Special Topics in Social Science: *Parenting & Gender*