

REVISED

BROOKLYN COLLEGE

OF

THE CITY UNIVERSITY OF NEW YORK

FACULTY COUNCIL

Meeting of March 10, 2015

The Committee on Undergraduate Curriculum and Degree Requirements herewith submits its recommendations in Curriculum Document 374.

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Respectfully submitted,

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Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

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SECTION A-I: SPECIAL ACTIONS
Department of Finance and Business Management
Bulletin update of changed business course names and prefixes

WHEREAS nine course names beginning with Business and the course prefix BUSN have changed to the course name Finance with the course prefix FINC,

WHEREAS these course name changes have been approved by Faculty Council,

WHEREAS there are degree programs and course descriptions in the Undergraduate Bulletin which need to be updated to reflect these changes,

WHEREAS the number of required updates are large and distributed though many programs in multiple schools,

WHEREAS clearances have been sought from the departments where these course name changes will have the greatest impact and those departments that have replied have approved,

RESOLVED, that mention of the following courses in the body of the Undergraduate Bulletin be updated so that the course name “Business” is replaced with “Finance [Business]” and that the course prefix “BUSN” is replaced with “FINC [BUSN]”:

Business 3310 Corporation Financial Management
Business 3311 Advanced Corporate Finance
Business 3330 Investment and Securities Markets
Business 3340 Options, Futures, and Commodities Markets
Business 3377 Global Financial Management
Business 4300W Seminar in Business Finance
Business 3370 Investment Science
Business 3375 Financial Instruments and their Pricing
Business 3378 Behavioral Finance and Economics

Example 1:

FROM:

Two of the following:

Economics 3320 or Business 3320;

~~Business 3340~~ or Economics 3332;

~~Business 3330~~.

TO:

Two of the following:

Economics 3320 or Business 3320;

Finance [Business] 3310 or Economics 3332;

Finance [Business] 3330.

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

Example 2:

FROM:

Required Courses (all of the following): Economics 2100 or Business 2100, Accounting 2001, ~~Business 3310, 3330, 3340, 2300.~~

TO:

Required Courses (all of the following): Economics 2100 or Business 2100, Accounting 2001, Business 2300, Finance [Business] 3310, 3330, 3340.

Example 3:

FROM:

Prerequisite: ~~Business 3310 [70.2] (BUSN 3310)~~ or Economics 3332 [70.8] (ECON 3332); Accounting 2001 [1] (ACCT 2001)

TO:

Prerequisite: Finance [Business] 3310 [70.2] (FINC [BUSN] 3310) or Economics 3332 [70.8] (ECON 3332); Accounting 2001 [1] (ACCT 2001)

Date of Departmental Approval: October 14, 2014

Effective date: Fall 2015

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SECTION A-III: CHANGES IN DEGREE PROGRAMS**Department of Biology****B.A. degree program in biology**

HEGIS code 0401; SED program code 01985

Department requirements (35-41.5 40-55 credits)

To enroll in any of the following courses--Biology 1002, ~~2074, 2071 or 2072W~~, 2002 or 2002W and Biology 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.

~~One of the following biology sequences, a), b), c), or d).~~

~~a) All of the following: Biology 1071 or 4019, 1072, 2073, 3003, 3006 or 3007W, 3011.~~

~~All of the following: Biology 2071 or 2072W, 2074, 3004.~~

~~At least 6 credits of the following: Biology 4001, 4002, 4011, 4010 or Computer and Information Science 2810, Biology 2001, 2002 or 2002W, 2010, 2020 or Psychology 2610, Biology 3020/Psychology 3610, Biology 3030W, Biology 4012, 4013, 4015, 4016, 4022, 3083, 5020, Interdisciplinary Studies 4101 or 4102, Chemistry 4570 or 4571 or other advanced courses approved by the chairperson or deputy chair for advising.~~

~~b) All of the following: Biology 1001, 1002, 3003, 3004, 3006 or 3007W, 3011.~~

~~At least 8 credits of the following: Biology 2001, 2002 or 2002W, 4001, 4002, 4011, 2071 or 2072W, 4010 or Computer and Information Science 2810, Biology 2010, 2020 or Psychology 2610, Biology 3020/Psychology 3610, Biology 3030W, Biology 4003, 4012, 4013, 4015, 4016, 4019, 4020, 4021, 4022, 4080, Biology 3080, 3081, 3082, 3083, Biology 5020, 5001 or 5010 or 5003W or 5014W or Interdisciplinary Studies 4101 or 4102, or Chemistry 4581, 4570 or 4571 or other advanced courses approved by the chairperson or deputy chair for advising.~~

At least 8 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, 5000W or 5001 or 5003W or 5010 or 5014W, Biology 5020, Chemistry 4581.

~~c) All of the following: Biology 1002, 1071, 1072, 3003, 3004, 3006 or 3007W, 3011.~~

At least 8 credits of the following: Biology 2001, 2002 or 2002W, 4001, 4002, 4011, 2071 or 2072W, 4010 or Computer and Information Science 2810, Biology 2010, 2020 or Psychology 2610, Biology 3020/Psychology 3610, Biology 3030W, Biology 4012, 4013, 4015, 4016, 4022,

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

~~3083, 5020, 5001 or 5010 or 5003W or 5014W or Interdisciplinary Studies 4101 or 4102, Chemistry 4570 or 4571 or other advanced courses approved by the chairperson or deputy chair for advising.~~

~~d) All of the following: Biology 1001, 2073, 2074, 3003, 3004, 3006 or 3007W, 3011.~~

~~At least 8 credits of the following: Biology 2001, 2002 or 2002W, 4001, 4002, 4011, 2071 or 2072W, 4010 or Computer and Information Science 2810, Biology 2010, 2020 or Psychology 2610, Biology 3020/Psychology 3610, Biology 3030W, Biology 4012, 4013, 4015, 4016, 4022, 3083, 5020, 5001 or 5010 or 5003W or 5014W or Interdisciplinary Studies 4101 or 4102, Chemistry 4570 or 4571 or other advanced courses approved by the chairperson or deputy chair for advising.~~

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 either 3510 or (both 3511 and 3512).

c) (Chemistry 1100, or (both 1050 and 2050), 2100, 3510, or (both 3511 and 3512), and either 3520 or (both 3521 and 3522).

d) (Chemistry 1100, or (both 1050 and 2050), and 2100 and 2500.

Mathematics 1201 or Psych 3400.

Department recommendations

Chemistry 3510 (or both 3511 and 3512) and 3520 or (both 3521 and 3522) and Physics 1100 and 2100 are required for some professional programs and are strongly recommended for prospective graduate students in biology.

Students who anticipate majoring in biology must see a departmental adviser before the end of the sophomore year in order to plan their programs.

Additional requirements for a B.A. degree

Candidates for a B.A. degree with a major in biology must complete at least 18 credits in advanced courses in the Biology department 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:

1. Old and obsolete courses have been removed and degree requirements have been cleaned up to remove confusion about the different schemes.

2. Minimum and maximum credits for the major have been updated

3. Psychology 3400 has been added as an alternative to the Mathematics 1201 as a suitable course for the major

4. The courses may be applied toward the 60 credits in science and mathematics have been updated according to the current bulletin.

5. The electives in the minor have been updated and synced with those of the major

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

6. New electives are added with the addition of new courses. The listing of the electives has been cleaned up and put in numerical order.

Date of department approval: February 10, 2015

Effective date of the change: Fall 2015

SECTION A-III: CHANGES IN DEGREE PROGRAMS**Department of Biology****B.S. degree program in biology**

HEGIS code 0401; SED program code 01984

Department requirements (48-50.5 54-57credits)

To enroll in any of the following courses--Biology 1002, ~~2074, 2071 or 2072W~~, 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.

One of the following biology sequences, a), b), c), or d).

a) All of the following: ~~Biology 2073, 1072, 1071 or 4019, 3006 or 3007W, 3003, 3011.~~

All of the following: ~~Biology 2074, 2071 or 2072W, 3004.~~

At least 9 credits of the following: ~~Biology 2001, 2002 or 2002W, 4001, 4002, 4011, 4010 or Computer and Information Science 2810, Biology 2010, 2020 or Psychology 2610, Biology 3020/Psychology 3610, Biology 3030W, Biology 4015, 4016, 4012, 4013, 4022, 3083, 5020, 5001 or 5010 or 5003W or 5014W or Interdisciplinary Studies 4101 or 4102, Chemistry 4570 or 4571 or other advanced courses approved by the chairperson or deputy chair for advising.~~

b) All of the following: ~~Biology 1001, 1002, 3003, 3004, 3006 or 3007W, 3011.~~

At least 12 credits of the following: ~~Biology 2001, 2002 or 2002W, 4001, 4002, 4011, 2071 or 2072W, 4010 or Computer and Information Science 2810, Biology 2010, 2020 or Psychology 2610, Biology 3020/Psychology 3610, Biology 3030W, Biology 4015, 4016, 4012, 4013, 4003, 4019, 4020, 4021, 4022, 4080, Biology 3080, 3081, 3082, 3083, Biology 5020, 5001 or 5010 or 5003W or 5014W or Interdisciplinary Studies 4101 or 4102, or Chemistry 4581, 4570 or 4571, or other advanced courses approved by the chairperson or deputy chair for advising.~~

At least 12 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, 5000W or 5001 or 5003W or 5010 or 5014W, Biology 5020, Chemistry 4581.

c) All of the following: ~~Biology 1072, 1071, 1002, 3003, 3004, 3006 or 3007W, 3011.~~

At least 12 credits of the following: ~~Biology 2001, 2002 or 2002W, 4001, 4002, 4011, 2071 or 2072W, 4010 or Computer and Information Science 2810, Biology 2010, 2020 or Psychology 2610, Biology 3020/Psychology 3610, Biology 3030W, Biology 4015, 4016, 4012, 4013, 4022,~~

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~~3083, 5020, 5001 or 5010 or 5003W or 5014W or Interdisciplinary Studies 4101 or 4102, Chemistry 4570 or 4571, or other advanced courses approved by the chairperson or deputy chair for advising.~~

~~d) All of the following: Biology 1001, 2073, 2074, 3003, 3004, 3006 or 3007W, 3011.~~

~~At least 12 credits of the following: Biology 2001, 2002 or 2002W, 4001, 4002, 4011, 2071 or 2072W, Biology 2010, 4010 or Computer and Information Science 2810, Biology 2010, 2020 or Psychology 2610, Biology 3020/Psychology 3610, Biology 3030W, Biology 4015, 4016, 4012, 4013, 4022, 3083, 5020, 5001 or 5010 or 5003W or 5014W or Interdisciplinary Studies 4101 or 4102, Chemistry 4570 or 4571, or other advanced courses approved by the chairperson or deputy chair for advising.~~

All of the following: Chemistry 1100 or both 1050 and 2050, 2100, 3510 or both 3511 and 3512, 3520 or both 3521 and 3522.

Mathematics 1201 or Psych 3400.

Department recommendation

Students who anticipate majoring in biology must see a departmental adviser before the end of the sophomore year in order to plan their programs.

Additional requirements for a B.S. degree

Candidates for a B.S. degree with a major in biology must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the Biology Department or required courses and allowed electives in other departments as described in ~~items a), b), c) or d)~~ above (not including Biology 1071 and 1072 ~~OR~~ 1001). 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 (*#) symbol in the Department of Health and Nutrition Sciences.

C) ---Anthropology and Archaeology 2201, 3230, 3240, 3250, 3260, 3199,3440 4665.

---Core Studies 5, 5.1, 5.2, 7.1, 7.2, 8.1, 8.2.

---Core Curriculum [1300 through 1399.]

---~~Math 1314~~, Biology 1010, Chemistry 1007, Physics 1331, Earth and Environmental Sciences 1010.

---Core Curriculum 3301 through 3399.

---Economics 3400, 4410, 3410, 4422.

---Philosophy 3203, 3204, 3601.

---Kinesiology 3271, 3275, 3023, 4229, 4251.

---Sociology 2701

---MCHC 2001.

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Rationale:

1. Old and obsolete courses have been removed and degree requirements have been cleaned up to remove confusion about the different schemes.
2. Minimum and maximum credits for the major have been updated
3. Psychology 3400 has been added as an alternative to the Mathematics 1201 as a suitable course for the major
4. The courses may be applied toward the 60 credits in science and mathematics have been updated according to the current bulletin.
5. The electives in the minor have been updated and synced with those of the major
6. New electives are added with the addition of new courses. The listing of the electives has been cleaned up and put in numerical order.

Date of department approval: February 10, 2015

Effective date of the change: Fall 2015

SECTION A-III CHANGES IN DEGREE PROGRAMS
Department of Finance and Business Management

B.S. degree program in ~~business, management, and finance~~ business management

HEGIS code 0506; SED program code 85067

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.

Department requirements (48-53 credits)

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 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 the requirement of two additional electives, students may take:

(a) any three courses with a business prefix.

(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 3410).

(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:

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Attainment of a 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 grade point average in the major that matters.

Rationale: The Finance and Business Management Department is being restructured. The department will be split into two: a Department of Finance and a Department of Business Management. BUSN 3310 will be designated as FINC 3310 and BUSN 4300W will be designated as FINC 4300W effective Fall 2015. The current Business, Management, and Finance degree has 45 credits of electives and students can potentially graduate with only one required finance course. The name change to B.S. in Business Management will reflect the true nature of this degree.

Date of department approval: October 14, 2014

Effective date of the change: Fall 2015

SECTION A-III CHANGES IN DEGREE PROGRAMS
Department of Chemistry

B.A. degree program in chemistry

HEGIS code 1905; SED program code 02082

Program requirements (49-53 1/2 credits)

Chemistry 1100 or Chemistry 1050 and 2050.

All of the following: Chemistry 2100, 3410 or 3415W, 3510 or both 3511 and 3512, 3520 or both 3521 and 3522, 4600 or 4610.

At least five credits chosen from the following: Chemistry 2700, 3420, 4530, 4550, 4570, 4571, 4572, 4580, 4581, 4620, 4640, 4720, 4760, 4761, either 4780 or 4790.

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

a) Physics 1100 (or Physics 1111 and 1112) and 2100.

b) Physics 1150 and 2150.

c) Physics 1150 and 2100.

The following mathematics sequence:

Mathematics 1201 and 1206

A minimum of 15 credits in advanced courses in chemistry must be completed at Brooklyn College with a grade of C- or higher in each course.

Rationale: The inclusion of the new course, CHEM 4572, is made for consistency with the proposed changes to the biochemistry curriculum discussed elsewhere.

Date of department approval: February 10, 2015

Effective date of the change: Fall 2015

SECTION A-III CHANGES IN DEGREE PROGRAMS
Department of Chemistry

B.S. degree program in chemistry

HEGIS code 1905; SED program code 02084

Program requirements (~~67-70 1/2~~ 69-72 ½ credits)

Chemistry 1100 or both Chemistry 1050 and 2050.

All of the following: Chemistry 2100, 3410 or 3415W, 3510 or both 3511 and 3512, 3520 or both 3521 and 3522, 4610, 4620.

At least nine credits chosen from the following: Chemistry 2700, 3420, 4530, 4550, 4570, 4571, 4572, 4580, 4581, 4640, 4720, 4760, 4761, either 4780 or 4790.

One of the following physics sequences a) or b) or c):

a) Physics 1100 (or Physics 1111 and 1112) and 2100.

b) Physics 1150 and 2150.

c) Physics 1150 and 2100.

~~Computer and Information Science 1110.~~

One of the following mathematics sequences a) or b):

a) Mathematics 1201 and 1206 and 2201.

b) Mathematics 3.20 and 4.20 or 1211 and 2201.

One of the following:

a) Computer and Information Science 1110

b) Mathematics 1501 or Mathematics 2501

c) One of the following courses: Chemistry 2700, 3420, 4530, 4550, 4570, 4571, 4572, 4580, 4581, 4640, 4720, 4760, 4761, 4780, 4790; if this option is chosen, this course cannot be used to satisfy any other requirements of the major listed above but can be used to satisfy the college-wide 24-credit minimum that is stated below.

A college-wide minimum of 24 credits in advanced courses in chemistry must be completed at Brooklyn College with a grade of C- or higher in each course.

Additional requirements for a B.S. degree

Candidates for a B.S. degree with a major in chemistry must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the Chemistry 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.

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

C) ---Anthropology and Archaeology 2200, 3199, 3230, 3240, 3250, 3260, 3265, 3266, 3425, 3440, 3470, 4665.

---Core Studies 5, 5.1, 5.2, 7.1, 7.2, 8.1, 8.2.

---Core Curriculum [1300 through 1399.]

---Math 1311, Biology 1010, Chemistry 1007, Physics 1331, Earth and Environmental Sciences 1010.

---Core Curriculum 3301 through 3399

---Economics 3400, 4410, 3410, 4422.

---Philosophy 3203, 3204, 3231, 3232, 3422, 3423, 3601, 3605, 3610.

---Kinesiology 3023, 3271, 3275, 3281, 3285, 4229, 4251.

---Sociology 2701.

Rationale: The inclusion of the new course, CHEM 4572, is made for consistency with the proposed changes to the biochemistry curriculum discussed elsewhere. The number of credits are changed not because the new curriculum necessitates more hours, but because the previous value was incorrect.

The proposed change to the CIS requirement of the BS curriculum amounts to giving students additional options beyond an introduction to programming. While the department acknowledges the central role of technology in science, its application in the laboratory rarely requires a formal introduction to programming. Indeed, the American Chemical Society does not include an introductory course in programming either in its required or recommended curricula for accredited programs, and Brooklyn College is one of the few Chemistry departments ever to have incorporated such a requirement.

Students will be given the option to pursue either an introductory course in programming, a course in statistics, or an additional advanced course in Chemistry. The logic is simply that students should have flexibility to pursue their interests more fully. While chemistry coursework includes an extensive introduction to applied statistics, some students may benefit from a more formal introduction. And students seeking to specialize in less quantitative areas of chemistry are given the option to take additional coursework in the field.

Date of department approval: February 10, 2015

Effective date of the change: Fall 2015

SECTION A-III CHANGES IN DEGREE PROGRAMS

Children and Youth Studies Program

B.A. degree program in children and youth studies

HEGIS code 2009.00; SED program code 33088

Program requirements (30 credits)

a) All of the following courses: Children and Youth Studies 2100W, 4200, 4900.

The program director, with the approval of the program's advisory committee, may allow substitutions for one or more of following requirements consistent with the educational goals of the program.

b) Five of the following courses: Children and Youth Studies 2120, 2200, 3110, 3610, 3410, 3310, 3320, 3620, 3630, 3510, 3430, 3130, 3700, 4100, 5100, 5200.

c) Two of the following courses: Africana Studies 3335; Childhood, Bilingual, and Special Education 2002 or Secondary Education 2002; English 3189 or Speech 1717 or Speech 2231; Health and Nutrition Sciences 3170; History 3320 or 3457 (crosslisted as Children and Youth Studies 3120); Psychology 2210 or 3220 or 3240; Puerto Rican and Latino Studies 2005; Sociology 2400 or 2401; School Psychology, Counseling and Leadership 3500.

All courses must be completed with a grade of C or higher.

A minimum of 9 credits must be completed at Brooklyn College.

Students interested in majoring in Children and Youth Studies must consult a program advisor as early as possible. Students should plan to complete all major requirements before taking the capstone course, Children and Youth Studies 4900.

Rationale: In spring 2014, the Children and Youth Studies Program held a retreat in which advanced students and graduates strongly encouraged the Program to introduce a career exploration course earlier in the degree program. Through collaboration with the Department of School Psychology, Counseling and Leadership (SPCL) we have developed SPCL 3500 to provide students with the opportunity to explore career opportunities working with children and youth earlier in the degree program. The introduction of this course addresses students' need to be exposed to relevant potential career paths prior to their final semester in the program.

Date of department approval: December 2, 2014

Effective date of the change: Fall 2015

SECTION A-III: CHANGES IN DEGREE PROGRAMS

Music, Conservatory of

B.A. degree program in music

HEGIS code 1005; SED program code 02021

Music is a writing intensive major.

Program requirements (48 credits plus foreign language or proficiency)

All of the following: Music 3211, 3212, 3213, 3214 (8 credits)

Music 3221, 3222, 3223, 3224 (4 credits)

Music 3231 and 3232, or 3235; 3233 or 3236; 3234 or 3237 (12 credits)

Music 11.2 or 3241, ~~41.3 or 3242, 41.4 or 3243~~ (12 credits)

Music 4430 or 4431 or 4440 or 4450 or 4460 or 4470 (3 credits); ~~and 3791, 3792 (7 credits)~~

Music 3225 or 3791 and 3226 or 3792 (4 credits)

Two credits in ensemble performance from Music 3700 through 3781 as assigned by the Conservatory of Music. (2 credits)

One seminar in music numbered in the 4900s or a suitable advanced course in another department or program, approved in advance by the director. (3 credits)

Students who wish to be considered for performance lessons, Music 3791 and 3792, in place of advanced keyboard classes, Music 3225 and 3226, must demonstrate proficiency in an audition no later than the beginning of their junior year. Final approval will be given by the director.

All music courses offered to satisfy the requirements for a major in music must be completed with a grade of C or higher.

Rationale: This change integrates two new courses into the BA in Music degree program. These courses, MUSC 3225 and MUSC 3226, are designed to meet the needs and challenges that our B.A. in Music students face in their endeavors to become well-rounded musicians and will replace the two semesters of private instruction on an instrument, MUSC 3791 and MUSC 3792, currently required in these programs. While serving as a continuation of the program currently offered by the Conservatory, these new advanced courses will focus on providing a higher level of proficiency in sight-reading and score-reading along with technical development, repertoire, and ensemble work. In addition, students will have the opportunity to choose and, in the case of composition students, create their own repertoire. The classes are geared toward an intermediate level; however, given the increase in individual attention, each student will be allowed the opportunity to develop and grow according to their own abilities and strengths. Students in the BA and Composition programs that demonstrate exception ability and meet the audition standards for the performance major may be considered to receive private instruction on their primary instrument in place of these classes. In each case, permission will be granted only by the Director.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015.

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SECTION A-III: CHANGES IN DEGREE PROGRAMS

Music, Conservatory of

B.Mus. degree program in music composition

HEGIS code 1004.10; SED program code 02019

Music is a writing intensive major.

Program requirements (66 credits plus foreign language or proficiency)

All of the following: Music 3211, 3212, 3213, 3214 (8 credits)

Music 3221, 3222, 3223, 3224 (4 credits)

Music 3231 and 3232, or 3235; 3233 or 3236; 3234 or 3237 (12 credits)

Music ~~41.2 or~~ 3241, ~~41.3 or~~ 3242, ~~41.4 or~~ 3243 (12 credits)

Music 3251, 3252, 3253, 3254, 3255, 3256 (18 credits)

Music 3315 or 4360; 4430 or 4431 or 4440 or 4450 or 4460 or 4470 or one seminar in music numbered in the 4900s (6 credits); ~~and both 3791 and 3792 (10 credits);~~

Music 3225 or 3791 and 3226 or 3792 (4 credits)

Two credits in ensemble performance from Music 3700 through 3781 as assigned by the Conservatory of Music. (2 credits)

In addition to the courses listed above, a faculty approved portfolio and approval of the Conservatory faculty are required for the bachelor of music degree. The portfolio will consist of representative works from required (Music 3251 through Music 3256), elective, and honors composition courses.

Students must submit a portfolio of work for review by a music composition jury at the end of each semester of Music 3251-3256 or 4861-4862

(Music Composition). A special jury for students in Music 3252 includes evaluation of overall progress in the program, on the basis of which permission to continue in the music composition program is granted or denied.

Students who wish to be considered for performance lessons, Music 3791 and 3792, in place of advanced keyboard classes, Music 3225 and 3226, must demonstrate proficiency in an audition no later than the beginning of their junior year. Final approval will be given by the director.

All music courses offered to satisfy the requirements for a major in music must be completed with a grade of C or higher.

~~**Program prerequisite**—Students who do not demonstrate the performing proficiency required for admission to Music 3791 must prepare to demonstrate proficiency in an audition not later than the beginning of their junior year.~~

Rationale: This change integrates two new courses into the B.Mus. in Music Composition degree program. These courses, MUSC 3225 and MUSC 3226, are designed to meet the needs and challenges that our B.Mus. in Music Composition students face in their endeavors to become well-rounded musicians and will replace the two semesters of private instruction on an instrument, MUSC 3791 and MUSC 3792, currently required in these programs. While serving as a continuation of the program currently offered by the Conservatory, these new advanced

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courses will focus on providing a higher level of proficiency in sight-reading and score-reading along with technical development, repertoire, and ensemble work. In addition, students will have the opportunity to choose and, in the case of composition students, create their own repertoire. The classes are geared toward an intermediate level; however, given the increase in individual attention, each student will be allowed the opportunity to develop and grow according to their own abilities and strengths. Students in the BA and Composition programs that demonstrate exceptional ability and meet the audition standards for the performance major may be considered to receive private instruction on their primary instrument in place of these classes. In each case, permission will be granted only by the Director.

The name change in the program, although perhaps redundant, clarifies the type of composition taught in this degree.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015.

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SECTION A-III CHANGES IN DEGREE PROGRAMS

Department of Political Science

B.A. degree program in political science

HEGIS code 2207; SED program code 02109

This is a writing intensive program.

Department requirements (31-36 credits)

1. Political Science 1001, 1002, 1003, 1004, 1005, or 1006.
2. One of the following 3000-level writing intensive seminars: Political Science 3012W, Political Science 3190W, Political Science 3191W, Political Science 3290W, Political Science 3390W, Political Science 3391W, Political Science 3392W, Political Science 3393W, Political Science 3490W, Political Science 3491W.
3. One of the following research methods courses: Political Science 3014W, Research Strategies in Public Policy or Political Science 3423, Mapping Politics: GIS Methods in Political Science
4. Political Science 4000W, Capstone Senior Seminar
5. A total of five additional courses from the 3000 level and above, excluding Political Science 3601, 3602, 3610, and 3611. Only one of Political Science 5001 and 5002 may be included. After satisfying the requirement in part 2 above students ~~make~~ may take additional 3000-level writing intensive seminars to satisfy this requirement.

Rationale: This change to degree requirements incorporates new courses added to the department curriculum in 2013-2014. Political Science 3423, Mapping Politics: GIS Methods in Political Science, is a new research methods course passed by the department in the Spring 2014 semester. Like Political Science 3014W, Research Methods in Public Policy, the course combines a weekly lecture (2.5 hours) with a weekly lab session (two hours), meeting for 4.5 hours a week. The course fulfills the same skills objectives as Political Science 3014W, including introducing students to key concepts and basic skills in order for them to “conduct a piece of research that combines interpretation and application of political science” (Goal 2, Objective 2), through the use of spatial methodology. Adding “Mapping Politics” (Political Science 3423) to the list of possible research methods courses would permit students to fulfill their methodology requirement through the in-depth study of a particular research method, the use of geographic information system technology, thereby increasing the specific quantitative skills used in graduate programs and sought after by employers.

Date of department approval: November 11, 2014

Effective date of the change: Fall 2015

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SECTION A-III CHANGES IN DEGREE PROGRAMS
Program in Urban Sustainability

B.A. degree program in urban sustainability

HEGIS code 0420; SED program code 21627

Department requirements (48-57 credits)

A. All of the following courses:

Urban Sustainability 1001, Urban Sustainability 2001, Biology 1001, Biology 3083, Earth and environmental sciences 1201, 3750, Economics 2200, 3254, Sociology 1101, 2201, Philosophy 3309, Urban Sustainability 4001W.

Economics 3400 or Earth and environmental sciences 3800 or Sociology 2112.

(Students who have completed Economics 2251 or Earth and environmental sciences 1500 or Sociology 2202 have satisfied the requirement for Urban Sustainability 1001; students who have completed Economics 3251 or Earth and environmental sciences 1501 or Sociology 2203 have satisfied the requirement for Urban Sustainability 2001).

B. Students must complete one of the three Options below:

Option 1: Concentration in Environmental Science

Earth and environmental sciences 3600, 3610, 3675, 3900.

Chemistry 1040 or 1100 or Earth and environmental sciences 3100.

Option 2: Concentration in Environmental Economics

Economics 3202, 3252, 3253, 4400W.

Option 3: Concentration in Environmental Sociology

Sociology 2701, 3202, 3204, 3205.

With the permission of the Steering Committee, students may be allowed to take up to 6 credits of other courses to satisfy the requirements listed in A and B.

Clearances: Biology, Earth and Environmental Sciences, Economics and Sociology

Rationale: The major in Urban Sustainability depends on the availability of courses offered by participating departments. This change is intended to allow the program flexibility to accommodate the needs of students when required courses are not available or when two required courses are offered during the same time slot.

Date of department approval: March 3, 2015

Effective date of the change: Fall 2015

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SECTION A-IV: NEW COURSES
Program in American Studies

AMST 3107W: Critical Writing on The Politics of Race and Nation

4 hours; 4 credits

Analysis of the politics of race and the struggles of people of color in the United States—including slavery and Reconstruction, the history of Native American conquest and removal, immigration and the changing meanings of whiteness, US imperialism, the liberation struggles of the 1960s, mass incarceration and post-9/11 racial politics. Focus on developing students' critical reading and analytical writing skills and on engaging with the issues of the day and their historical contexts in substantive, thorough form. Reading and writing-intensive course. (This course is the same as Political Science 3191W.)

Prerequisite: English 1012 and one of the following: Political Science *1001[1.51], 1002[1.7], 1003, 1004, 1005, 1006, or Core Curriculum 1230 [2.3] or permission of instructor.

Contact hours: 4

Frequency of Offering: Once a year

Projected enrollment: 15

Clearances: None

Rationale: This course was approved by Political Science in 2013. The course's interdisciplinary nature, and its focus on various dimensions of race and the cultural, social, and political struggles of people of color in the United States, also make it a perfect addition to the American Studies curriculum. Political Science has agreed to cross-list the course with American Studies.

Program/Department Goals Addressed by the Course:

To understand the cultural and social institutions, beliefs, values, and expressive arts that shape American society.

To understand the social, cultural, and ideological diversity of American culture, and the manner in which the intersecting dynamics of race, ethnicity, class, gender, and other axes of social difference produce dissimilar "American" experiences for individuals and groups.

To conduct cultural, aesthetic, and historical analysis using methods drawn from multiple disciplinary approaches; to understand the theories and methodologies of interdisciplinary study and situate cultural documents and expressive forms in social, historical, economic, and political contexts.

To understand the relation between expressive forms of American culture and structures of social and political power; to think carefully and critically about dynamics of social and cultural inequality, difference, and justice.

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Course Objectives:

1. To introduce students to scholarly approaches to politics of race and the struggles of people of color for equality and social justice
2. To investigate the history and political economy of race in the United States
3. To learn to examine the shifting meanings of race in America, how people contested and re-shaped those meanings in response to the politics and social needs of the time
4. To analyze the ways people have constructed the public terms of the debate and how they have organized to contest racial injustice
5. To explore the interdisciplinary approaches to contemporary issues involving the politics of race

Course Outcomes:

By the end of the course, students will be able to:

1. Assess and interpret scholarship across a variety of disciplines in our study of race in the American nation while placing U.S. political processes in historical context
2. Analyze the idea of race and how it has changed over time, examining the factors and processes that have shaped its definition
3. Read critically, summarize and assess the credibility of the main arguments put forth in the readings across a variety of disciplines
4. Express ideas in writing, and write analytically, constructing thesis statements and coherent arguments
5. Write critically about the readings and be able to make connections between various issues and readings and synthesize various author's analyses into a persuasive argument

Date of departmental approval: October 20, 2014

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of Biology

BIOL 4025 Molecular Phylogenetics and Evolution

3 hours; 3 credits

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

Prerequisite: Biology 1001, 1002 and permission of the instructor

Contact hours: 3

Frequency of Offering: one section per year in the spring semester

Projected enrollment: 25 students

Clearances: None

Rationale: Molecular phylogenetic analysis is now an essential component of research projects in both basic and applied research, but these methods are often applied without a clear understanding of their limitations, leading to errors in the analysis and interpretation of phylogenetic data. This course aims to provide a solid foundation in the theory and application of phylogenetic methods in the biological sciences, with extensive hands-on practicals complementing in-class lectures on phylogenetic theory.

Program/Department Goals Addressed by this Course:

DEPARTMENTAL OBJECTIVES AND OUTCOMES	
CORE BIOLOGICAL KNOWLEDGE	
Genetics	<ul style="list-style-type: none"> • Demonstrate an understanding of Mendelian genetics • Demonstrate an understanding of pedigree analysis • Distinguish between autosomal inheritance and sex-chromosome linked inheritance
Evolution	<ul style="list-style-type: none"> • Explain how natural selection has contributed to evolution and diversity of life forms • Demonstrate familiarity with evolutionary mechanisms
Organisms and Ecology	<ul style="list-style-type: none"> • Describe diversity, body plans and evolutionary relationships among animals • Demonstrate an understanding of population genetics and demography
PRACTICAL COMPETENCIES	
	<ul style="list-style-type: none"> • Independently investigate biological phenomena using proven research tools and methods • Develop familiarity with laboratory and research procedures by formulating hypotheses, reading the scientific literature, designing and executing experiments and preparing results in tabular / graphical form • Communicate scientific results in written and presentation form
PROFESSIONAL DEVELOPMENT / ETHICS	
	<ul style="list-style-type: none"> • Adhere to the highest professional standards of the scientific community • Evaluate important technological advances and discoveries with respect to their impact on society and the environment

Objectives of Course:

By the end of the course, the students will be able to:

- develop and design a phylogenetic research project
- generate, assemble, and align DNA sequences
- reconstruct molecular phylogenies using distance, parsimony, likelihood, and Bayesian methods, and to discuss the limitations of each
- generate dated phylogenetic trees
- understand the difference between gene- and species-trees
- use phylogenies to reconstruct the evolution of biologically interesting characters
- review and critically assess phylogenetic analyses
- concisely summarize a phylogenetic research article in an oral presentation and written summary

Method of evaluation: Student performance will be evaluated through participation in laboratory sections (25%), short-answer take-home quizzes (20%), a written summary and oral presentation (30%) on a phylogenetic paper of the students' choosing, and a final exam (25%).

Method of assessment: Regular take-home quizzes will evaluate student mastery of phylogenetic theory, while in-class practicals will provide direct feedback on student understanding and application of phylogenetic methods. Finally, the in-depth analysis of a phylogenetic paper of each student's choosing will provide the opportunity to assess newly

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acquired knowledge in a novel context, providing a demonstration of student understanding of the course material and their higher-level critical thinking skills.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of Biology

BIOL 4026 Global Bacterial, Protozoan and Viral killers

3 hours; 3 credits

Global public health threats, global infectious diseases, tuberculosis, malaria and AIDS epidemics, and *Mycobacterium tuberculosis*, *Plasmodium falciparum*, and HIV biology.

Prerequisite: Biology 1001, 1002, and 3003.

Contact hours: 3

Frequency of Offering: one section per year in the spring semester

Projected enrollment: 25 students

Clearances: None

Rationale: Infectious diseases are responsible for the death of millions of people worldwide. This course is designed to provide students with a basic understanding of the current knowledge regarding major pathogenic microbes with impact on global public health. The emphasis is on *Mycobacterium tuberculosis* (causative agent of tuberculosis), *Plasmodium falciparum* (causative agent of malaria), and human immunodeficiency virus (HIV, causative agent of acquired immunodeficiency syndrome (AIDS)). These pathogenic agents are responsible for devastating mortality and morbidity worldwide, situations increasingly exacerbated by the rise of drug resistance. The understanding of the biology of these pathogenic agents, their corresponding epidemiology, and the challenges associated with implementing global infectious disease control against the diseases they produce is a key component of a comprehensive education in biology and a catalyst for the awareness of global public health issues associated with infectious diseases. The goal of this course is to provide students with the conceptual foundation and critical thinking skills that should enable them to understand the basic biology of these pathogens in the context of their ability to produce disease, explore their global epidemiology, and identify challenges associated with implementing global infectious disease control strategies. To this end, the course integrates topic-specific lectures, critical analysis of topic-specific research articles with classroom discussion sessions, student presentations, and written homework assignments based on topic-specific research articles.

Department Goals Addressed by the Course

- Students will acquire competency in a core body of knowledge in microbiology, particularly in the field of infectious disease and medical microbiology of global pathogens
- Students will acquire practical competencies designed to enhance critical thinking skills as defined by the ability to independently acquire biological information from the scientific literature, particularly in the field of infectious disease and medical microbiology of global pathogens

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- Students will understand professional etiquette and the ethical implications of biological discoveries for society and the environment

Objectives of Course

- To improve the students' critical thinking and analytical skills in areas of infectious diseases and medical microbiology
- To enhance the students' ability to analyze infectious disease and medical microbiology research literature.
- To develop the students' understanding of the basic biology and the epidemiology of the main global bacterial, protozoan and viral killers
- To stimulate the students' awareness of the current strategies and challenges associated with the control of the top three infectious diseases affecting global health
- To catalyze the students' appreciation of the impact of the drug resistance crisis on control of global infectious diseases
- To help the student develop a perspective of global public health issues arising from infectious diseases
- To awaken the students' curiosity for global public health

Anticipated Course Outcomes

- Core Biological Knowledge
 - Students will demonstrate an understanding of the biology of *Mycobacterium tuberculosis*, *Plasmodium falciparum*, HIV and other global pathogens
 - Students will demonstrate a basic understanding of the epidemiology of tuberculosis, malaria, and AIDS.
 - Students will demonstrate an understanding of mechanisms of drug action and drug resistance
- Practical Competencies
 - Students will demonstrate competency to summarize and communicate infectious disease and medical microbiology scientific information in written and oral form
 - Students will demonstrate competency to critically analyze infectious disease and medical microbiology research literature

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- Professional Development / Ethics
 - Students will demonstrate an understanding of infectious disease problems affecting the global community
 - Students will demonstrate an understanding of the complexities faced by professionals during decision making processes needed to develop, implement, and evaluate global infectious disease control programs

Method of evaluation:

Grades will be determined by four exams distributed throughout the course (15% of final grade each), student's class participation (10% of final grade), student's presentation (10% of final grade), and four individual written assignments (5% of final grade each).

Method of assessment:

Four in-class exams, four individual written assignments, an oral presentation, and class participation in discussion sessions will provide the opportunity to assess the student's mastery of the specific topics of the course as well as critical thinking and analytical skills.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of Biology

BIOL 5000W Independent Library Research

Minimum of 9 hours conference and independent work; 3 credits

Writing intensive independent library research in Biology under the supervision of a Brooklyn College faculty member. Critical review of literature pertaining to a problem or specialized topic in biology culminating in a paper/webpage written according to department guidelines.

Prerequisite: English 1012; Biology 1001, 1002 and permission of the sponsoring faculty member and department chairperson.

Frequency of Offering: 1 section per semester

Projected enrollment: 25 students per section

Clearances: None

Rationale: The ability to critically review scientific literature on a specific topic and compile it in the form of a current and comprehensive scientific review of that topic is an integral part of the training of a student majoring in the discipline of biology. This course attempts to provide a structured environment to meet this need in training biology majors.

Departmental goals addressed by the course:

1. Students will acquire practical competencies designed to enhance critical thinking skills as defined by the ability to independently acquire biological information from the scientific literature.
2. Students will understand professional etiquette and the ethical implications of biological discoveries for society and the environment.

Objectives of Course:

- To improve the students' critical thinking and analytical skills in a particular and specific topic in the biological field.
- To enhance the students' ability to analyze and research literature.
- To train the students to compile the literature scrutinized into a comprehensive and current review of the topic in scientific language

Anticipated Course Outcomes:

Core Biological Knowledge

- Students will demonstrate an understanding of a specific topic in biology

Practical Competencies

- Students will demonstrate competency to critically analyze research literature
- Students will demonstrate competency to summarize and communicate scientific information in a proper scientific format

Professional Development / Ethics

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- Students will be able evaluate important technological advances and discoveries with respect to their impact on society and the environment
- Students will adhere to the highest professional standards of the scientific community

Writing objectives: The ability to communicate complex scientific ideas and scientific findings in a succinct and lucid manner while ensuring a comprehensive coverage of the topic of study including:

1. the ability to use writing to reflect on one's learning and to understand difficult material
2. the ability to draft and revise written material
3. the ability to organize according to a pattern that is appropriate to the discipline

Method of Assessment:

1. Weekly short summary assignments including identified sub-topics in consultation with the instructor are graded for accuracy of understanding of scientific concepts (Objective 1) and for clear organization of the sub-topics in the form of review article or Wikipage (Objective 3). Organization, grammar and syntax are marked. Each individual summary is revised and is subsequently rewritten and resubmitted till approved by the instructor (Objective 2).

2. The review article or Wikipage is planned and organized over the latter part of the semester by iterative compilation of sub-topics around the outline developed previously (Objectives 2 and 3), and preparation of the complete draft in the last month of the semester. At least one draft will be submitted, marked for content accuracy (Objective 1) organization and theme development (Objective 3), clarity, grammar and syntax. The draft will be revised before final submission and grading (Objective 2).

Date of departmental approval: February 10, 2015

Date of WAC approval: February 11, 2015

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of Chemistry

CHEM 4572 Biochemistry Laboratory I

4 hours laboratory; 2 credits

An introduction to laboratory techniques for biochemistry including spectroscopic and chromatographic methods used in the study of biomolecules and their reactions. The course will also include use of specialized software and biotechnology databases. (Not open to students who have completed Chemistry 4570.)

Prerequisite or corequisite: Chemistry 3520 or both 3521 and 3522; Chemistry 4571.

Frequency of Offering: Fall

Projected enrollment: 30 students/year.

Clearances: None

Rationale: In order to simplify administrative issues related to the biochemistry laboratory, Chemistry 4570 (a combined 5-credit lecture and laboratory course) will be discontinued and the laboratory and lecture components of the course will be formally listed as separate courses. Coordination of the curriculum will be unchanged. This change serves the interest of students by permitting them to repeat the laboratory course, if necessary, without repeating the lecture. Also, providing separate grades for lecture and laboratory work permits more accurate reporting of assessment of the quality of student work (which may be very high in one and low in the other).

The department will continue to coordinate laboratory and lecture curricula, and there is no reason to expect student learning to be affected by the change.

Department Goals Addressed by Course:

To provide preparatory coursework and experience for students seeking careers in scientific, medical and technical fields requiring a background in chemistry/biochemistry. The specific learning objectives addressed by the course include:

- A. Students demonstrate the ability to use common laboratory equipment and to maintain experimental records.
- B. Students can critically analyze data and assess possible sources of error.
- C. Students demonstrate the ability to search scientific literature to address both conceptual and factual questions.
- D. Students can communicate scientific concepts effectively in both written and oral formats.
- E. Students can assess the hazards associated with laboratory procedures and apply suitable safety precautions.

In this course, students will

- perform a variety of experiments for the qualitative and quantitative analysis of biomolecules including nucleic acids, proteins, lipids
- students will gain experience in the preparation of solutions and the use of equipment such as spectrophotometers

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- students will learn enzyme kinetics/inhibition
- students will perform assays, extractions, various chromatographic procedures and will gain experience with modern separation methods using FPLC
- students will learn to use software for data analysis (e.g., SigmaPlot)
- students will gain experience writing reports in the format of scientific journal articles
- students will learn about genes and proteins through in-depth experience with biochemical databases

Method of Evaluation:

Student performance will be assessed based upon the content of written laboratory reports and quizzes.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-IV: NEW COURSES

Department of History

HIST 3254 The Soviet Union as Multiethnic Empire

3 hours; 3 credits

The history of the Soviet Union as a multiethnic empire, 1917-1991. Topics include Soviet nationality policy; the construction and evolution of the Soviet state and its constituent socialist republics; the evolution and variation of governmental approaches to managing and “Sovietizing” non-Russian citizens; the “everyday life” of non-Russian peoples throughout the empire; ethnic discrimination, conflicts, and deportations within the Soviet Union; the elevation of Russia as the “first among equals;” and the fracturing of the Soviet Union in 1991 along national lines. Emphasis will be placed on the geographic and cultural diversity of the Soviet Union as whole.

Prerequisite: English 1010 or permission of department

Contact hours: 3

Frequency of Offering: Once every two years

Projected enrollment: 1 section of 25 students

Clearances: None

Rationale: This course will introduce students to the history of the Soviet Union as a multiethnic empire. While the entirety of the Soviet period will be studied, emphasis will be placed on the profound ethnocultural diversity that characterized the Soviet population and how this diversity is central to the understanding of the Soviet (and “post-Soviet”) experience as a whole. Students will examine the political, economic, social, and cultural contexts that shaped the experiences of non-Russian and Russian citizens of the Soviet Union alike. The experiences of Soviet citizens will be examined from multiple geographic and cultural angles; the course thus decenters “European Russia” by insisting upon examination also of the Baltics, Ukraine, Belarus, the Caucasus, Central Asia, and Siberia. In the final week of the course, students will consider the continuing legacies of the Soviet empire and how they impact the multiple “post-Soviet” nation-states birthed by the dissolution of the Soviet empire in 1991.

In their study of both primary and secondary sources, students will develop not only their knowledge of Soviet [Eurasian] history, but also their skills of historical analysis and writing. Moreover, this course will enhance and strengthen the History Department’s offerings, allowing undergraduate history majors an opportunity to satisfy their modern European history requirement. Given the large number of Brooklyn College students whose personal and family histories are tied to the Soviet Union *as a multiethnic empire*, this course seems poised to offer a ready appeal to a large number of students. The course satisfies all the major goals the department has established for B.A. students in history, detailed below.

Department Goals Addressed by Course:

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REVISED

1. Acquisition of knowledge about key historical terminology, concepts, actors and events and their significance across a reasonably broad distribution of fields (as determined by the department's distribution requirements).
2. Acquisition of specific historical skills including ability to articulate a clear problem; identify appropriate theories and/or research methodologies; locate primary and secondary sources; formulate a thorough bibliography, and employ proper practices of citation.
3. Ability to comprehend and analyze historiography.
4. Ability to analyze primary sources.
5. Ability to apply historical skills in writing.

Objectives of Course

1. To familiarize students with the topic of the future in a theoretical and historical context.
2. To develop in students the ability to think critically about the major questions that shape historical study of the topic and to articulate their own interpretations.
3. To help students develop good critical reading skills.
4. To help students improve their writing skills.
5. To help students express their ideas orally in both formal presentations and informal class discussions.

Anticipated Outcomes of Course

By the conclusion of this course, students will have:

1. Demonstrated, both orally and in writing, their familiarity with the history of the Soviet Union as a multiethnic empire
2. Demonstrated, both orally and in writing, their own ideas about the major historical questions in the field.
3. Read, analyzed, and discussed a significant body of primary and secondary sources.
4. Completed a number of written assignments and exams that ask them to present clearly and concisely their arguments, supporting evidence, and conclusions.
5. Participated extensively and meaningfully in class discussion.

Method of Evaluation:

- Meaningfully and regularly participate in class discussions (15%)
- Compose two primary source analyses (4 pages each) (15% each; 30% combined)
- Write 5 "informal reading responses" (1-2 pages each) (10% total)
- Write a midterm exam (take-home essay and in-class exam) (25%).
- Write a final exam (take-home essay and in-class exam) (20%).

Method of Assessment:

The *class discussions* will primarily allow for assessment of O1-5.

The *primary source analyses* will primarily allow for assessment of O1-4.

The "*informal reading responses*" will primarily allow for assessment of O1-4

The *midterm exam* and the *final exam* will primarily allow for assessment of O1-4.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

SECTION A-IV: NEW COURSES
Department of History

HIST 3339 History of the Future

3 hours; 3 credits

Perceptions and visions of the future in Western culture from the scientific revolution to present as developed through science fiction, utopian literature, world's fairs, movies, and the field of future studies. Major themes include science and technology, socialism, war, cities, the environment, and the relationship between history and prophecy.

Prerequisite: English 1010 or permission of department

Contact hours: 3

Frequency of Offering: Once a year

Projected enrollment: 1 section of 20 students

Clearances: None

Rationale: In a society that arguably thinks far more about tomorrow than it does about today, it is important to understand what drives our visions of the future and why they change over time. This course explores past perceptions and visions of the future, concentrating on the body of futurist thought that has developed in the West since the scientific revolution. Science, and especially technology, will be major themes since they have had tremendous impacts on the Western vision of the future, which today is shared by much of the non-Western world as well. By the end of the course, students will have developed a firm understanding of the historical forces that have produced modern ideas about the future and will have thought carefully about their own personal roles in producing and consuming visions of tomorrow.

The course will enhance the History Department's offerings by providing undergraduates with an opportunity to satisfy their transnational and comparative history requirement.

Department Goals Addressed by Course:

The History Department has content goals that are reflected in distribution requirements and six major skill goals. The course will help students to complete the required three credit hour distribution requirement in transnational and comparative history and will address all of our major skill goals:

1. Understanding the relationship between cause and effect in history.
2. Understanding the connections between social, cultural, economic, technological, political, and diplomatic developments across time and space.
3. Acquiring a sense of chronology—the time sequence of historical events, as well as issues of periodization.
4. Making connections between past and present and understanding patterns of change and continuity in history.
5. Developing and broadening historical perspectives (making intellectual leaps) across a range of spatial, temporal, and cultural boundaries.

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6. Developing critical thinking, reading, and writing skills in history.

Objectives of Course

1. To familiarize students with the topic of the future in a theoretical and historical context.
2. To develop in students the ability to think critically about the major questions that shape historical study of the topic and to articulate their own interpretations.
3. To help students develop good critical reading skills.
4. To help students improve their writing skills.
5. To help students express their ideas orally in both formal presentations and informal class discussions.

Anticipated Outcomes of Course

By the conclusion of this course, students will have:

1. Demonstrated, both orally and in writing, their familiarity with the theoretical and historical issues that define historical study about the future.
2. Demonstrated, both orally and in writing, their own ideas about the major questions that shape historical study of the topic.
3. Read, analyzed, and discussed a large number of historical works.
4. Completed a number of written assignments that ask them to present clearly and concisely their arguments, supporting evidence, and conclusions.
5. Participated extensively in class discussion and completed a formal presentation.

Method of Evaluation:

- Participate in weekly discussion and deliver an informal class presentation on an extra reading (20%).
- Write ten one-page entries in a reading journal (10%).
- Write two three-page book reviews (20%).
- Complete a 6-8-page research paper (45%).
- Give a formal presentation on the research paper (5%).

Method of Assessment:

- The *discussion* and *informal oral presentation* will primarily allow for an assessment of O1-3, 5.
- The *reading journal* and *book reviews* will primarily allow for an assessment of O1-4.
- The *research paper* will primarily allow for an assessment of O1-4.
- The *formal oral presentation* will primarily allow for an assessment of O1-3, 5.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

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SECTION A-IV: NEW COURSES

Department of History

HIST 3424 American Military History to 1900

3 hours; 3 credits

This course explores the military history of the British-American colonies and the United States through the end of the nineteenth century. Through lectures, reading, and discussions, we will discuss civilian-military relations; the role of culture and social hierarchies in wartime; the effects of war on the home front; professionalization, recruitment, and mobilization; imperial ambitions, strategies, and tactics; technology and logistics; and the commemoration of war. We will examine the ways in which historians and historical actors have interpreted this subject.

Prerequisite: English 1010 or permission of department

Contact hours: 3

Projected enrollment: 30 students

Clearances: None

Rationale: This course will introduce students to the early military history of the British-American colonies and the United States, inflected with the elements of political, social, and cultural history that have particularly influenced American military history scholarship in recent years. In their examination of both primary and secondary sources, students will develop not only their knowledge of the relevant history, but also their skills of historical analysis and writing. Moreover, this course will enhance and strengthen the History department's offerings, and will potentially provide a nice complement to offerings in twentieth-century and twenty-first century American military history. The course satisfies all the major goals the department has established for B.A. students in history, detailed below.

Department Goals Addressed by Course:

1. Acquisition of knowledge about key historical terminology, concepts, actors and events and their significance across a reasonably broad distribution of fields (as determined by the department's distribution requirements).
2. Acquisition of specific historical skills including ability to articulate a clear problem; identify appropriate theories and/or research methodologies; locate primary and secondary sources; formulate a thorough bibliography, and employ proper practices of citation.
3. Ability to comprehend and analyze historiography.
4. Ability to analyze primary sources.
5. Ability to apply historical skills in writing.

Objectives of Course

1. To gain an introduction to the major themes, problems, events, and actors in the American military, from the seventeenth century to 1900
2. To examine critically American conflicts and its military
3. To interpret primary and secondary sources that relate to this subject

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4. To understand the ways in which American military history informs the present
5. To better express ideas verbally and in writing

Anticipated Outcomes of Course

By the end of this course students will have:

1. Shown familiarity, both orally and in writing, with American military history before 1900
2. Gathered and presented in written form evidence to support broader assertions about relevant historical developments surrounding American military conflict
3. Evaluated critically both primary and secondary sources
4. Shown the ability to make verbal and written arguments that present clearly and concisely their supporting evidence and their conclusions.

Method of Evaluation:

Students will:

- be required to actively participate in class discussions
- write three 2-3 page analytical essays, at least one of which will be principally grounded in a primary source
- take one midterm in-class exam
- write one final take-home exam

Method of Assessment:

1. The *class discussions* will primarily allow for assessment of O1-5.
2. The *analytical essays* will primarily allow for assessment of O1-5.
3. The *midterm exam* will primarily allow for assessment of O1-5.
4. The *final exam paper* will primarily allow for assessment of O1-5.

Date of departmental approval: November 11, 2014

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of History

HIST 3454 Mini-Course: Veterans, Memorials and American Memory

1 hour; 1 credit

Exploration of the relationship between war and memory in the United States since 1865. Using films, fiction and other forms of documentary evidence, the course investigates the various ways public and private memory of war has shaped and been shaped by American social discourse about topics such as gender, race, politics, psychiatry and popular culture.

Prerequisite: English 1010 or permission of department

Contact hours: 1

Frequency of Offering: Once every year

Projected enrollment: 20

Clearances: None

Rationale: There are approximately 22 million U.S. military veterans alive today, and 220,000 live in New York City. The city is home to over 15,000 veterans from the wars in Iraq and Afghanistan, and at present, approximately 200 veterans are enrolled in classes at Brooklyn College.

This course, designed in cooperation with the Brooklyn College Veterans Students Organization, is designed to investigate the intersection of the public and private memories of these veterans and the nation as a whole.

Additionally, it will serve as a limited introduction to military cultural competence.

Department Goals Addressed by Course:

1. Acquisition of knowledge about key historical terminology, concepts, actors and events and their significance across a reasonably broad distribution of fields (as determined by the department's distribution requirements).
2. Acquisition of specific historical skills including ability to articulate a clear problem; identify appropriate theories and/or research methodologies; locate primary and secondary sources; formulate a thorough bibliography, and employ proper practices of citation.
3. Ability to comprehend and analyze historiography.
4. Ability to analyze primary sources.
5. Ability to apply historical skills in writing.

Objectives of Course

1. to provide an understanding of the evolving nature of American memories of war since 1865.
2. to develop students' critical thinking skills.

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3. to train students in analyzing historical evidence in a variety of media: including written texts, popular film, oral history, and public art.
4. to develop the skills necessary for writing well-organized, analytical papers.
5. to develop students' rhetorical skills and increase their confidence in making verbal arguments.

Anticipated Outcomes of Course

By the end of this course students will have:

- Mastered at an appropriate level the historical content relevant to the topic.
- Gathered and presented in written form evidence to support broader assertions about relevant political, cultural, economic, and social trends
- Evaluated critically both primary and secondary sources
- Shown the ability to make verbal arguments that present clearly and concisely their supporting evidence, and their conclusions.

Method of Evaluation:

- Participate in weekly discussions and write 4 1-page entries in a reading journal (25%)
- Write a 6-8 page paper on an aspect of the history of American veterans, memorials and memory, selected in consultation with the instructor (75%)

Method of Assessment:

- *Weekly discussions and reading journal entries* will permit an evaluation of the following objectives:
 - 1: to develop an understanding of the evolving nature of American memories of war since 1865
 - 2: to develop students' critical thinking skills.
- The *formal essay* will permit and evaluations of the following objectives:
 3. to train students in analyzing historical evidence in a variety of media: including written texts, popular film, oral history, and public art.
 4. to develop the skills necessary for writing well-organized, analytical papers.
 5. to develop students' rhetorical skills and increase their confidence in making verbal arguments.

Date of departmental approval: October 14, 2014

Effective date: Fall 2015

SECTION A-IV: NEW COURSES

Music, Conservatory of

MUSC 3225 Advanced Keyboard Workshop 1

3 hours; 2 credits

Advanced level of keyboard studies for music composition majors and bachelor of arts in music majors whose primary instrument is the piano, as well as students who have completed the 4-semester keyboard sequence and wish to continue their keyboard studies. Enhance and further develop greater technical facility, proficiency in sight-reading and score-reading, and provide the opportunity to work on advanced level repertoire. (May be retaken only once if not passed the first time.)

Prerequisite: Music 3224 with a grade of C or better or permission of the director

Contact hours: 3

Frequency of Offering: 1 section every semester

Projected enrollment: 12 students per section

Clearances: None

Rationale: These two new courses, MUSC 3225 and MUSC 3226, are designed to meet the needs and challenges that our B.Mus. in Music Composition and B.A. in Music students face in their endeavors to become well-rounded musicians and will replace the two semesters of private instruction on an instrument, MUSC 3791 and MUSC 3792, currently required in these programs. While serving as a continuation of the keyboard program currently offered by the Conservatory, these new advanced courses will focus on providing a higher level of proficiency in sight-reading and score-reading along with technical development, repertoire, and ensemble work. In addition, students will have the opportunity to choose and, in the case of composition students, create their own repertoire. The classes are geared toward an intermediate level; however, given the increase in individual attention, each student will be allowed the opportunity to develop and grow according to their own abilities and strengths. Students in the BA and Composition programs that demonstrate exception ability and meet the audition standards for the performance major may be considered to receive private instruction on their primary instrument in place of these classes. In each case, permission will be granted only by the Director.

Department Goals Addressed by Course:

For composition students, this course will provide skills specific to their goals and needs as composers. For the B.A. students, this course will allow them to advance according to their individual capabilities and career goals. This course will also allow those interested to further advance their keyboard proficiency.

Objectives/Outcomes of Course: To develop the keyboard skills necessary for composers and non-performance majors for creating and performing with fluency and accuracy.

Method of Evaluation: Performance of weekly assignments, Midterm Exam, and Final Exam

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Method of Assessment: Student's grade will be determined as follows: Weekly assignments 50%, Midterm 25%, Final Exam 25%

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-IV: NEW COURSES

Music, Conservatory of

MUSC 3226 Advanced Keyboard Workshop 2

3 hours; 2 credits

A continuation of Music 3225. Advanced level of keyboard studies for music composition majors and bachelor of arts in music majors whose primary instrument is the piano, as well as students who have completed the 4-semester keyboard sequence and wish to continue their keyboard studies. Enhance and further develop greater technical facility, proficiency in sight-reading and score-reading, and provide the opportunity to work on advanced level repertoire. (May be retaken only once if not passed the first time.)

Prerequisite: Music 3225 with a grade of C or better or permission of the director

Contact hours: 3

Frequency of Offering: 1 section every semester

Projected enrollment: 12 students per section

Clearances: None

Rationale: These two new courses, MUSC 3225 and MUSC 3226, are designed to meet the needs and challenges that our B.Mus. in Music Composition and B.A. in Music students face in their endeavors to become well-rounded musicians and will replace the two semesters of private instruction on an instrument, MUSC 3791 and MUSC 3792, currently required in these programs. While serving as a continuation of the keyboard program currently offered by the Conservatory, these new advanced courses will focus on providing a higher level of proficiency in sight-reading and score-reading along with technical development, repertoire, and ensemble work. In addition, students will have the opportunity to choose and, in the case of composition students, create their own repertoire. The classes are geared toward an intermediate level; however, given the increase in individual attention, each student will be allowed the opportunity to develop and grow according to their own abilities and strengths. Students in the BA and Composition programs that demonstrate exception ability and meet the audition standards for the performance major may be considered to receive private instruction on their primary instrument in place of these classes. In each case, permission will be granted only by the Director.

Department Goals Addressed by Course:

For composition students, this course will provide skills specific to their goals and needs as composers. For the B.A. students, this course will allow them to advance according to their individual capabilities and career goals. This course will also allow those interested to further advance their keyboard proficiency.

Objectives/Outcomes of Course: To develop the keyboard skills necessary for composers and non-performance majors for creating and performing with fluency and accuracy.

Method of Evaluation: Performance of weekly assignments, Midterm Exam, and Final Exam

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Method of Assessment: Student's grade will be determined as follows: Weekly assignments 50%, Midterm 25%, Final Exam 25%

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of Psychology

PSYC 2002 Laboratory Experience 2

Minimum of 9 hours conference and independent work; 3 credits

Faculty-supervised independent research that includes data collection and analysis and/or theoretical work. Weekly conference. Final report must be submitted to the department.

Prerequisite: Psychology 1000 and permission of the chairperson

Contact hours: tutorial

Frequency of Offering: every semester

Projected enrollment: 25 students per year

Clearances: None

Rationale: Students majoring in psychology and interested in applying to graduate school programs must show several semesters of research experience to be competitive. Currently, the only courses that allow students to participate in the research process are PSYC 2001 Laboratory Experience and PSYC 5001-4 Independent Research series. PSYC 5000 courses have several prerequisites (PSYC 3400 Statistics, PSYC 3450W Experimental Psychology, as well as a minimum of 6 additional credits in advanced psychology department courses), which typically restricts enrollment to 3rd, and most often, 4th year students and means students only rarely take PSYC 5002-4. In addition, the existing PSYC 5001-4 Independent Research courses are honors courses. Thus, in order to allow students earlier in their Major to gain research experience and to take the honors courses at a later time once they have fulfilled all requirements, the 2000-level Laboratory Experience course was introduced in 2012. In order to allow opportunity for students to gain additional research experience earlier in their course of study and without having to meet the honors requirements, additional laboratory experience courses at the 2000 level are necessary.

Program/ Department Goals Addressed by Course: Allow students to gain experience in all aspects of the research process by actively participating in research studies. Both student and faculty researchers in the department benefit from having students trained over a longer period of time, thus allowing more in-depth training in research design and methods. The students further benefit from advisors' in-depth knowledge of their performance when writing letters of recommendation for graduate school applications.

Objectives of Course: Training students in conducting research and enhancing the degree of competitiveness for entry into graduate programs in psychology.

Outcomes Anticipated for Course: This course will allow students to gain the skills to plan their own research studies, understand caveats of research designs and experimentation, and acquire a broader and at the same time more in-depth perspective on various types of psychological research conducted in various areas of psychology. This course will also assist students in making choices of research area for graduate school, after they graduate from Brooklyn College.

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Method of evaluation: Students will be required to submit a report based on the research project. There will not be a final exam since this is a research participation course.

Method of assessment: Course objectives and outcomes will be assessed through 1) evaluation of student progress with respect to performance in carrying out laboratory activities and 2) evaluation of the report on the research project undertaken. A course grade will be assigned based on these evaluations.

Date of departmental approval: November 11, 2014

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of Psychology

PSYC 2003 Laboratory Experience 3

Minimum of 9 hours conference and independent work; 3 credits

Faculty-supervised independent research that includes data collection and analysis and/or theoretical work. Weekly conference. Final report must be submitted to the department.

Prerequisite: Psychology 1000 and permission of the chairperson

Contact hours: tutorial

Frequency of Offering: every semester

Projected enrollment: 25 students per year

Clearances: None

Rationale: Students majoring in psychology and interested in applying to graduate school programs must show several semesters of research experience to be competitive. Currently, the only courses that allow students to participate in the research process are PSYC 2001 Laboratory Experience and PSYC 5001-4 Independent Research series. PSYC 5000 courses have several prerequisites (PSYC 3400 Statistics, PSYC 3450W Experimental Psychology, as well as a minimum of 6 additional credits in advanced psychology department courses), which typically restricts enrollment to 3rd, and most often, 4th year students and means students only rarely take PSYC 5002-4. In addition, the existing PSYC 5001-4 Independent Research courses are honors courses. Thus, in order to allow students earlier in their Major to gain research experience and to take the honors courses at a later time once they have fulfilled all requirements, the 2000-level Laboratory Experience course was introduced in 2012. In order to allow opportunity for students to gain additional research experience earlier in their course of study and without having to meet the honors requirements, additional laboratory experience courses at the 2000 level are necessary.

Program/ Department Goals Addressed by Course: Allow students to gain experience in all aspects of the research process by actively participating in research studies. Both student and faculty researchers in the department benefit from having students trained over a longer period of time, thus allowing more in-depth training in research design and methods. The students further benefit from advisors' in-depth knowledge of their performance when writing letters of recommendation for graduate school applications.

Objectives of Course: Training students in conducting research and enhancing the degree of competitiveness for entry into graduate programs in psychology.

Outcomes Anticipated for Course: This course will allow students to gain the skills to plan their own research studies, understand caveats of research designs and experimentation, and acquire a broader and at the same time more in-depth perspective on various types of psychological research conducted in various areas of psychology. This course will also assist students in making choices of research area for graduate school, after they graduate from Brooklyn College.

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Method of evaluation: Students will be required to submit a report based on the research project. There will not be a final exam since this is a research participation course.

Method of assessment: Course objectives and outcomes will be assessed through 1) evaluation of student progress with respect to performance in carrying out laboratory activities and 2) evaluation of the report on the research project undertaken. A course grade will be assigned based on these evaluations.

Date of departmental approval: November 11, 2014

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of Psychology

PSYC 2004 Laboratory Experience 4

Minimum of 9 hours conference and independent work; 3 credits

Faculty-supervised independent research that includes data collection and analysis and/or theoretical work. Weekly conference. Final report must be submitted to the department.

Prerequisite: Psychology 1000 and permission of the chairperson

Contact hours: tutorial

Frequency of Offering: every semester

Projected enrollment: 25 students per year

Clearances: None

Rationale: Students majoring in psychology and interested in applying to graduate school programs must show several semesters of research experience to be competitive. Currently, the only courses that allow students to participate in the research process are PSYC 2001 Laboratory Experience and PSYC 5001-4 Independent Research series. PSYC 5000 courses have several prerequisites (PSYC 3400 Statistics, PSYC 3450W Experimental Psychology, as well as a minimum of 6 additional credits in advanced psychology department courses), which typically restricts enrollment to 3rd, and most often, 4th year students and means students only rarely take PSYC 5002-4. In addition, the existing PSYC 5001-4 Independent Research courses are honors courses. Thus, in order to allow students earlier in their Major to gain research experience and to take the honors courses at a later time once they have fulfilled all requirements, the 2000-level Laboratory Experience course was introduced in 2012. In order to allow opportunity for students to gain additional research experience earlier in their course of study and without having to meet the honors requirements, additional laboratory experience courses at the 2000 level are necessary.

Program/ Department Goals Addressed by Course: Allow students to gain experience in all aspects of the research process by actively participating in research studies. Both student and faculty researchers in the department benefit from having students trained over a longer period of time, thus allowing more in-depth training in research design and methods. The students further benefit from advisors' in-depth knowledge of their performance when writing letters of recommendation for graduate school applications.

Objectives of Course: Training students in conducting research and enhancing the degree of competitiveness for entry into graduate programs in psychology.

Outcomes Anticipated for Course: This course will allow students to gain the skills to plan their own research studies, understand caveats of research designs and experimentation, and acquire a broader and at the same time more in-depth perspective on various types of psychological research conducted in various areas of psychology. This course will also assist students in making choices of research area for graduate school, after they graduate from Brooklyn College.

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Method of evaluation: Students will be required to submit a report based on the research project. There will not be a final exam since this is a research participation course.

Method of assessment: Course objectives and outcomes will be assessed through 1) evaluation of student progress with respect to performance in carrying out laboratory activities and 2) evaluation of the report on the research project undertaken. A course grade will be assigned based on these evaluations.

Date of departmental approval: November 11, 2014

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of Psychology

PSYC 2530 Introduction to Cognitive Psychology

3 hours; 3 credits

This course will provide an introductory overview of basic concepts in cognitive psychology such as memory, attention, perception, problem solving, decision-making, language and imagery. Experimental findings and proposed models will be discussed for each topic.

Prerequisite: Psychology 1000

Contact hours: 3

Frequency of Offering: 2 sections each Fall and Spring semesters

Projected enrollment: 140 students per year

Clearances: None

Rationale: This course will provide an introductory overview of basic concepts in cognitive psychology and will serve as a pre-requisite to several advanced-level courses in the area of cognition, learning, perception and emotion, for which an understanding of the fundamentals of cognitive psychology is essential.

No special facilities are required to offer this course. A Smart Classroom is required.

Program/ Department Goals Addressed by Course: This course addresses the goal of the Psychology Department to offer mid-level courses that optimally prepare students for advanced level coursework. This course is of fundamental importance to students Majoring in Psychology, while also serving a wide interest. This course will be highly recommended to the large number of students majoring in Psychology. Consistent with the objectives of the Psychology Department, the course is aimed at developing students' understanding of basic concepts in cognition while developing critical thinking and communication skills, applying psychological and biological principles, and facilitating personal development and preparedness for advanced coursework in Psychology.

Content Objectives of Course: Through this course, students will 1) be offered a broad introduction to major themes in cognitive psychology, 2) learn to read and critically evaluate primary literature in cognitive psychology, 3) understand how the scientific method is applied to the investigation of cognitive phenomena, and 4) improve ability to communicate research findings.

General Education Objectives of Course: The course is aimed at 1) promoting critical thinking skills (about research, methodology, theory, and applied concepts), and 2) developing the ability to review and present primary literature.

Outcomes Anticipated for Course: In order to demonstrate mastery of the learning objectives, students will 1) be given the opportunity to perform on in-class examinations, 2) develop and deliver an in-class presentation, 3) weekly, brief writing assignments that involve evaluation of

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published, empirical reports, and 3) share their knowledge through class participation.

Method of evaluation: Students will be evaluated on mastery of the learning objectives based on performance on two exams (mid-term and final; 25% each), multiple choice question development (15%), weekly writing assignment that involves evaluation of an empirical report (20%), and one in-class presentation (15%).

Method of assessment: Course objectives and outcomes will be compared through the administration of two exams (mid-term and final), brief written assignments, and an in-class oral presentation. Exams, homework assignments, presentations, and papers will be evaluated and assigned a grade using a rubric for scoring that is based on the course objectives (as a frame of reference) and requirements stated in the course syllabus.

Date of departmental approval: December 9, 2014

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of Psychology

PSYC 3590 Psychology of the Arts

3 hours; 3 credits

A survey of psychological research on topics relevant to aesthetics, creativity, and the arts. Emphasizes methodological issues and psychological theories in the visual arts, music, literature, and related artistic domains.

Prerequisite: PSYC 3400 or permission of the Chairperson

Contact hours: 3

Frequency of Offering: 1 per year in the Spring semester

Projected enrollment: 25 students per year

Clearances: Art, Early Childhood and Art Education, English, Music, Philosophy

Rationale: This course will introduce students to the psychological study of the arts with an emphasis on theoretical issues and empirical approaches. The course is intended for undergraduate majors in Psychology who are interested in how psychological research informs complex, real-world issues in the arts. The course will emphasize critical evaluation of empirical research and pose questions about psychology of the arts and creativity. The course will strengthen the Psychology Department's commitment to developing critical thinking skills and potentially foster undergraduate research in the arts and creativity.

A Smart Classroom is required.

Program/ Department Goals Addressed by Course: This course addresses the Psychology Department's goals of promoting an understanding of scientific methods, critical thinking, and content knowledge of psychology, aesthetics, and the arts, as well as the application of psychological principles to the arts. The course will also prepare students for graduate studies and/or professional advancement. The course is appropriate for students in many sub-disciplines within Psychology that have a strong research orientation.

Content Objectives of Course: In this course, students will: 1) understand scientific theories and empirical approaches in psychology as they apply to the arts; 2) evaluate scientific questions posed in psychology as they apply to the arts; and 3) develop critical thinking and oral communication skills through in-class discussion.

General Education Objectives of Course: This course is aimed at 1) promoting critical thinking skills about research, methodology, theory, and applied concepts, and 2) developing the ability to review and analyze primary literature.

Outcomes Anticipated for Course: In order to demonstrate mastery of the learning objectives, students will: 1) be given the opportunity to perform on in-class quizzes and examinations; 2) write a research proposal on an empirical topic studied in the arts; and 3) share their knowledge through in-class participation.

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Method of evaluation: Students' mastery of the learning objectives will be evaluated as follows: 1) weekly quizzes (10%); 2) class participation and discussion (20%); 3) midterm exam (20%); 4) final exam (20%); and research proposal and presentation (30%).

Method of assessment: Course objectives and outcomes will be assessed through: 1) the quality of in-class discussion comments; 2) the administration of the weekly quizzes and two exams (midterm and final); and 3) research proposal and presentation based on the development of a research topic in the arts. Exams, quizzes, and papers will be evaluated and assigned a grade based on a rubric. The rubric will be based on the course objectives and requirements stated in the course syllabus.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of Sociology

SOCY 3207 Sociology of Education

3 hours; 3 credits

Education as a social institution. Theoretical perspectives, empirical studies and policy. The organization and structure of the American education system; inequality; peer-groups and socialization; race/class/gendered experiences in schools; current issues with the American education system; the politics of reform.

Prerequisite: SOCY 1101

Contact hours: 3

Frequency of Offering: Every other semester

Projected enrollment: 1 section of 25 students

Clearances: None

Rationale: This course builds on the current course offerings in the Sociology Department by adding an opportunity for students to better understand sociological concepts and theory as they relate to the institution of education. This course further incorporates the application of methods and theory in the understanding and analysis of issues related to the institution of education within a sociological framework.

Program/Department Goals Addressed by Course: Course is designed to allow students that opportunity to integrate theory and methods of sociological research in the critical examination of the institution of education in the U.S.

Objectives of Course:

Students will:

- Explore a wide array of theoretical and policy oriented perspectives pertaining the structure and sociological purpose of the education system.
- Engage in a critical understanding of the institution of education through the application of sociological theory and methods
- Explore key differences in education systems and education policy, both historically and geographically.
- Become familiar with shortcomings associated with current education policy while exploring potential policy alternatives.
- Explore linkages between theory, policy, and methods in relation to a broad array of topics associated with the sociology of education.

Outcomes Anticipated for Course:

Students will:

- Understand the role of education and the education system in the larger society.
- Be able to link social theory and methods to a critical analysis of current education policy and potential reforms.

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

- Be able to understand the clear link between the education system and other American institutions.
- Be able to identify issues in the education system as well as avenues, and barriers, to its reform

Method of Evaluation:

The course will require a semester length research paper/project (20%)

A series of short application based papers (40%)

Midterm Exam (20%)

Final Exam (20%)

Method of Assessment:

Achievement of course objectives and outcomes will be assessed using a combination of the exams, assignments, and research project.

Date of departmental approval: November 11, 2014

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Department of Sociology

SOCY 3604: Population and Society

3 hours; 3 credits

Introduction to the sociological study of population, basic issues, theories, concepts, and measures. Historical and contemporary views; developed and developing countries. Population change, fertility, mortality, immigration; social demography, including race, religion, class, and gender.

Prerequisite: SOCY 1101

Contact hours: 3

Frequency of Offering: Every other semester

Projected enrollment: 1 section of 25 students

Clearances: None

Rationale: This course builds on the current course offerings in the Sociology Department by adding an opportunity for students to better understand sociological concepts and theory as they relate to the institution of education. This course further incorporates the application of methods and theory in the understanding and analysis of issues related to the institution of education within a sociological framework.

Program/Department Goals Addressed by Course: Course is designed to allow students that opportunity to integrate theory and methods of sociological research in the substantive area demography.

Objectives of Course:

Students will:

- Explore a wide array of theoretical and policy oriented perspectives pertaining the dynamics of population growth, decrease, and change.
- Explore population dynamics through a multifaceted lens related to racial, class-based, religious, gendered, and geographical differentiations.
- Engage in a critical understanding of the population dynamics through the application of sociological theory and methods
- Explore current issues of public health, environmental disaster, and human crises as they pertain to population dynamics.
- Apply quantitative methods of data analysis in relation to each week's substantive topic (where appropriate).

Outcomes Anticipated for Course:

Students will:

- Understand demographic theory as it pertains to issues of population change.

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

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- Understand the role individual characteristics of race, class, gender, and others have on their likelihood of being directly affected by, or part of, larger patterns of population change.
- Be able to link issues of population dynamics to current, and historical, events of human crises.
- Be able to obtain and analyze demographic data.

Method of Evaluation:

The course will require a semester length research paper/project (20%)

A series of short application based papers (40%)

Midterm Exam (20%)

Final Exam (20%)

Method of Assessment:

Achievement of course objectives and outcomes will be assessed using a combination of the exams, assignments, and research project.

Date of departmental approval: November 11, 2014

Effective date: Fall 2015

SECTION A-IV: NEW COURSES

Department of School Psychology, Counseling and Leadership

SPCL 3500 Career Paths for Working with Children and Youth

3 hours; 3 credits

This course integrates academic and experiential learning to assist students in identifying career options. The course orients advanced undergraduate students to applied professions serving children in education, mental/physical health, advocacy, policy, recreation, informal learning and other community contexts. Focus on disciplines that promote child and adolescent development, well-being, and civic engagement, and that are located in and out of school settings.

Course to be taught by either School Psychology, Counseling and Leadership or Children and Youth Studies Program faculty.

Prerequisite: Permission of Program Coordinator

Contact hours: 3

Frequency of Offering: Every semester

Projected enrollment: 1 section of 20 students

Clearances: Psychology, and Childhood Bilingual and Special Education

Rationale: The course builds upon previous coursework in Children and Youth Studies and promotes exploration of professional roles focused on work with children and youth. The course is an elective for Children and Youth Studies majors and must be completed prior to enrollment in both the capstone course and the internship experience. Academic and experiential work on this course will assist students in identifying specific areas of interest as well as focus their search for internship placements and subsequent career paths.

Students will observe and reflect upon work settings and professional roles addressing children and youth's needs. Based on field placements and library research, students will prepare a portfolio exploring distinct career options; the portfolio will be a component for student evaluation. Attention will be given to the particular needs and interests of students and targeted assignments will expand their knowledge of professional roles. Collaboration with Magner Center staff will facilitate career exploration, including participation in vocational interest assessments, engagement with professionals who are members of the BC alumni network, and workshops on resume writing and interviewing.

This course has been developed collaboratively with faculty in Children and Youth Studies, and the Magner Center staff.

Program/Department Goals Addressed by Course:

The Children and Youth Studies Program addresses the educational goals and career objectives of undergraduate students who are interested in children and youth and are seeking pathways to careers in related professional fields. The proposed course fulfills this central Program goal by engaging students in active exploration of career paths.

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

Objectives of Course:

Students will:

- Explore an array of career options working with children and youths
- Engage in career exploration through a variety of methods
- Learn about educational and degree requirements required in various professions
- Explore their career choices in actual field settings
- Ascertain personal qualities in relation to career goals
- Take vocational inventories to ascertain compatibility with career options.
- Be informed about internship opportunities in various fields and careers paths
- Prepare for job related interviewing and learn resume writing skills

Outcomes Anticipated for Course:

Students will:

- Define their career interests and direction after an active guided search
- Become well informed about steps required to enter their career of choice
- Apply to internship sites based on prior exploration of personal interest and career options
- Explore careers options beyond those that students had initially considered

Method of Evaluation:

The course will require a portfolio based on three career options.

Log and reflection on field experience

Completed resume and letter of introduction

Completion of two interest/vocational inventories

Final Exam

Method of Assessment:

Students will complete an anonymous survey upon completion of the course

The instructor(s) and Program Coordinator will jointly evaluate the quality of student work

Date of departmental approval: November 11, 2014

Effective date: Fall 2015

SECTION A-IV: NEW COURSES
Program in Women and Gender Studies

WGST 3608 Lesbian, Gay, Bisexual and Transgender Health

3 hours; 3 credits

Develop an understanding of historical and contemporary health issues facing sexual minorities (Lesbian, Gay, Bisexual, Transgender, Queer). Topics include factors that contribute to negative health outcomes in LGBT populations related to mental health, HIV/STIs, substance use, smoking, certain types of cancer, and victimization. (This course is the same as HNSC 4153)

Prerequisite: HNSC 2181

Contact hours: 3

Frequency of Offering: Once a year

Projected enrollment: 35

Clearances: Psychology

Rationale: With the growing visibility and acceptance of Lesbian, Gay, Bisexual, and Transgender (LGBT) populations, understanding and addressing health issues is quickly becoming an important arena public health practice. This course will fill a demand for curricular offerings in LGBTQ/sexuality studies from Women's and Gender Studies majors and minors; it also reflects faculty interest and expertise. Additionally, this course's emphasis on health and health policy both compliments and helps to balance our existing curriculum.

Program goals addressed by the course

- Describe women and men using an intersectional framework that includes, among other structures: race, class, sexuality, class, ethnicity, nationality, (dis)ability, and age; explain the distinctions between gender, sex, and sexual orientation, and how gender norms are related to norms of sexuality; understand the concepts of homophobia, misogyny, sexism, heterosexism, and heteronormativity.
- Explain discrimination and violence against women and LGBTQ people in a variety of theoretical lenses such as classical liberalism, marxism, post-structuralism, critical race theory, and post-colonial theory; understand the history of discrimination against women, lesbian, gay, bisexual, transgender and queer people in the U.S. and globally; and describe the different forms of resistance that women's and LGBTQ movements have pursued.

Objectives of the course and anticipated outcomes:

After completing this course, students will be able to

- Describe contemporary and historical issues in health among LGBT populations
- List ways in which public health practice serves diverse populations
- Define, discuss, and describe the ways in which negative health outcomes intersect and interact among LGBT populations

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

Method of Evaluation:

Information Expedition Paper	25%	
Library Research Paper		30%
Final exam		40%
Attendance and participation	5%	

Method of Assessment:

Achievement of course objectives and outcomes will be assessed using a combination of the final exam, information expedition paper (as described in the course outline), library research paper (as described in the course outline), and through participation in class, which will include both individual and group discussions of topics related to the course objectives.

Date of departmental approval: February 4, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites and corequisite

FROM:

BIOL 2001 Organismic Biology II, Zoology

2 hours; 2 credits

Key concepts in the structure and development of animals with special reference to those species used as models in contemporary developmental biology.

Prerequisite: Biology 1002 ~~or both Biology *2073 [17] and 1072 [29].~~

Corequisite: ~~Biology 2002.~~

TO:

BIOL 2001 Organismic Biology II, Zoology

2 hours; 2 credits

Key concepts in the structure and development of animals with special reference to those species used as models in contemporary developmental biology.

Prerequisite: Biology 1001 and Biology 1002.

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits. Organismic Biology II laboratory (Bio 2002) has been a corequisite with Bio 2001 (lecture), as much of the content of 2002 was not covered elsewhere in the major. However, our major now includes a comprehensive introductory sequence (laboratory-based Bio 1001 and Bio 1002). Bio 1001 and Bio 1002 now cover a portion of what had once only been covered in Bio 2002, so the corequisite with 2001 is no longer necessary.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 2002 Animal Form and Function Laboratory

4 hours; 2 credits

Dissection and microscopic examination of the structure and development of animals.

Prerequisite: Biology 1002 ~~or both Biology 2073 and 1072.~~

Corequisite: Biology 2001.

TO:

BIOL 2002 Animal Form and Function Laboratory

4 hours; 2 credits

Dissection and microscopic examination of the structure and development of animals.

Prerequisite: Biology 1001 and Biology 1002.

Corequisite: Biology 2001.

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites and description

FROM:

BIOL 2002W Animal Form and Function Laboratory

5 hours; 3 credits

Dissection and microscopic examination of the structure and development of animals. Introduction to major ideas of evolution and changes in animal body plans. Emphasis on current experimental techniques to measure animal behavior, including critical scientific literature review, field observations of animal behavior, multiple working-hypotheses generation, testing of mutually exclusive predictions using modern ethological techniques (ethogram construction and time-budget analysis), and simple statistical analysis of behavioral data. Emphasis is on how ecological variation and selection impacts animal behavior and on measuring and analyzing animal behavior in a rigorous way. Literature review, weekly writings, a field animal-behavior project, a group presentation and a major research paper will be required. Writing intensive course. (Not open to students who have completed Biology 3002.)

Prerequisite: English 1012 and Biology 1002 ~~or both Biology 2073 and 1072.~~

Corequisite: ~~Biology 2001.~~

TO:

BIOL 2002W Animal Form and Function Laboratory

5 hours; 3 credits

Dissection and microscopic examination of the structure and development of animals. Introduction to major ideas of evolution and changes in animal body plans. Emphasis on current experimental techniques to measure animal behavior, including critical scientific literature review, field observations of animal behavior, multiple working-hypotheses generation, testing of mutually exclusive predictions using modern ethological techniques (ethogram construction and time-budget analysis), and simple statistical analysis of behavioral data. Emphasis is on how ecological variation and selection impacts animal behavior and on measuring and analyzing animal behavior in a rigorous way. Literature review, weekly writings, a field animal-behavior project, a group presentation and a major research paper will be required. Writing intensive course. (Not open to students who have completed Biology 2002.)

Prerequisite: English 1012, Biology 1001 and Biology 1002.

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits. An error in the course has been corrected in the bulletin description.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 2010 Advanced Cell and Molecular Biology

3 hours; 3 credits

Introduction to the biology of the cell with emphasis on molecular aspects of biology. Ultrastructures, molecular composition, functions of the cell. Emphasis on cellular energetics, information storage and transfer, protein synthesis, growth, reproduction, and functional integration of cellular organelles and inclusions.

Prerequisite: Biology 1002 or ~~*2073 [17]~~, and Chemistry ~~*2100 [2]~~.

TO:

BIOL 2010 Advanced Cell and Molecular Biology

3 hours; 3 credits

Introduction to the biology of the cell with emphasis on molecular aspects of biology. Ultrastructures, molecular composition, functions of the cell. Emphasis on cellular energetics, information storage and transfer, protein synthesis, growth, reproduction, and functional integration of cellular organelles and inclusions.

Prerequisite: Biology 1001, Biology 1002 and Chemistry 2100.

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 3003 Microbiology

2 hours; 2 credits

Microbiology as a science, structure and function of microbes, microbial interrelationships, microbial metabolism, mechanisms of recombination, and microbes as agents of disease.

Prerequisite: Biology 1002, ~~or Biology *1080 [3] and 1081[4], or Biology *2073 [17] and 1072 [29].~~

TO:

BIOL 3003 Microbiology

2 hours; 2 credits

Microbiology as a science, structure and function of microbes, microbial interrelationships, microbial metabolism, mechanisms of recombination, and microbes as agents of disease.

Prerequisite: Biology 1001 and Biology 1002

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 3004 Microbiology Laboratory

4 hours; 2 credits

Techniques for isolation, cultivation, and characterization of bacteria and the use of microbes as experimental organisms.

Prerequisite or corequisite: Biology 3003

TO:

BIOL 3004 Microbiology Laboratory

4 hours; 2 credits

Techniques for isolation, cultivation, and characterization of bacteria and the use of microbes as experimental organisms.

Prerequisite: Biology 1001, and Biology 1002

Prerequisite or corequisite: Biology 3003.

Rationale: Biology 1001 and 1002 are now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 3005 Microbiology Laboratory for Health Sciences

4 hours; 2 credits

Study of bacteria, molds, and yeasts in relation to human welfare. (Does not count towards the major in biology.)

Prerequisite: Biology 1002 ~~or both Biology *1080 [3] and 1081 [4]P~~, and permission of the chairperson of Biology or Health and Nutrition.

Prerequisite or corequisite: Biology 3003 ~~[52]~~.

TO:

BIOL 3005 Microbiology Laboratory for Health Sciences

4 hours; 2 credits

Study of bacteria, molds, and yeasts in relation to human welfare. (Does not count towards the major in biology.)

Prerequisite: Biology 1001, Biology 1002 and permission of the chairperson of Biology or Health and Nutrition.

Prerequisite or corequisite: Biology 3003

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 3006 Evolution

2 hours; 2 credits

Introduction to major ideas and models of evolution; emphasis on genetic mechanisms, natural selection, and other processes in explaining structures and functions of individuals and populations; current ideas to account for the biodiversification of life on earth. (Not open to students who have completed Biology 3007W [38.1W] or Biology 4080 [50].)

Prerequisite: Biology 3011; ~~either a) 1002, or b) 2073 and either 1072 or 1071.~~

TO:

BIOL 3006 Evolution

2 hours; 2 credits

Introduction to major ideas and models of evolution; emphasis on genetic mechanisms, natural selection, and other processes in explaining structures and functions of individuals and populations; current ideas to account for the biodiversification of life on earth. (Not open to students who have completed Biology 3007W [38.1W] or Biology 4080 [50].)

Prerequisite: Biology 1001, Biology 1002, Biology 3011

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirements of Biology 1001 and Biology 1002 are now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 3007W Evolution

3 hours; 3 credits

Introduction to major ideas and models of evolution; emphasis on genetic mechanisms, natural selection, and other processes in explaining structures and functions of individuals and populations; current ideas to account for the biodiversification of life on earth. Weekly writings, a group presentation and a major paper will be required. Writing intensive course. (Not open to students who have completed Biology 3006 [38] or 4080.)

Prerequisite: Biology 1002 ~~or both 2073 and 4072~~, and 3011; English 1012.

TO:

BIOL 3007W Evolution

3 hours; 3 credits

Introduction to major ideas and models of evolution; emphasis on genetic mechanisms, natural selection, and other processes in explaining structures and functions of individuals and populations; current ideas to account for the biodiversification of life on earth. Weekly writings, a group presentation and a major paper will be required. Writing intensive course. (Not open to students who have completed Biology 3006 [38] or 4080.)

Prerequisite: Biology 1001, Biology 1002 and 3011; English 1012.

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 3011 Genetics

3 hours; 3 credits

Principles and problems of heredity, including gene transmission, mutation, recombination, and function. (Not open to students who have completed Biology 2080.)

Prerequisite: Biology 1002 ~~or both Biology 2073 and 1072.~~

TO:

BIOL 3011 Genetics

3 hours; 3 credits

Principles and problems of heredity, including gene transmission, mutation, recombination, and function. (Not open to students who have completed Biology 2080.)

Prerequisite: Biology 1001 and Biology 1002

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 3080 Invertebrate Zoology

2 hours lecture, 4 hours laboratory; 4 credits

Structure, life histories, and phylogeny of the most important invertebrate forms.

Prerequisite: Biology 1002

TO:

BIOL 3080 Invertebrate Zoology

2 hours lecture, 4 hours laboratory; 4 credits

Structure, life histories, and phylogeny of the most important invertebrate forms.

Prerequisite: Biology 1001 and Biology 1002

Rationale: The requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 3081 Developmental Anatomy

2 hours lecture, 4 hours laboratory; 4 credits

Introduction to structure, development, and phylogeny of vertebrates.

Prerequisite: Biology 1002

TO:

BIOL 3081 Developmental Anatomy

2 hours lecture, 4 hours laboratory; 4 credits

Introduction to structure, development, and phylogeny of vertebrates.

Prerequisite: Biology 1001 and Biology 1002

Rationale: The requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites and description

FROM:

BIOL 3082 Ecology

2 hours lecture, 4 hours laboratory and supervised field work; 4 credits

Populations of plants and animals, their relationships to environments and each other. Natural communities, their functions and utilizations. Field and laboratory methods in ecology. Five all-day field trips. (~~Not open to students who have completed Biology 62.~~)

Prerequisite: Biology 3006 [~~38~~] or ~~4080~~ [~~50~~].

TO:

BIOL 3082 Ecology

2 hours lecture, 4 hours laboratory and supervised field work; 4 credits

Populations of plants and animals, their relationships to environments and each other. Natural communities, their functions and utilizations. Field and laboratory methods in ecology. Five all-day field trips.

Prerequisite: Biology 1001, Biology 1002, and Biology 3006 or 3007W

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 and 1002 are now stated explicitly to address any confusion with transfer credits. Biology 3007W is added as an alternative to 3006

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 3083 Principles of Ecology

3 hours lecture, 3 credits

Introduction to the principles of ecology; biology of populations, communities, and ecosystems; basic issues of biodiversity.

Prerequisite: Biology 1002 ~~or all of Biology 1072 [29], 2071 [29.1] and 1071; or both Biology 3001 [45] and 3002 [45.1].~~

TO:

BIOL 3083 Principles of Ecology

3 hours lecture, 3 credits

Introduction to the principles of ecology; biology of populations, communities, and ecosystems; basic issues of biodiversity.

Prerequisite: Biology 1001 and Biology 1002 or permission of the instructor.

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4001 Field Studies in Botany

30 hours lecture, 60 hours fieldwork and laboratory work; 4 credits

Field trips to observe associations in typical plant habitats. Laboratory consideration of the characteristics, evolutionary relationships, and geography of flowering plants. Summer session.

Prerequisite: Biology 1002 ~~or 1072 [29]~~.

TO:

BIOL 4001 Field Studies in Botany

30 hours lecture, 60 hours fieldwork and laboratory work; 4 credits

Field trips to observe associations in typical plant habitats. Laboratory consideration of the characteristics, evolutionary relationships, and geography of flowering plants. Summer session.

Prerequisite: Biology 1001 and Biology 1002

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4002 Field Studies in Zoology

30 hours lecture, 60 hours fieldwork and laboratory work; 4 credits

Field studies of animals in their natural environments. Laboratory work. Summer session.

Prerequisite: Biology 1002 ~~or 2071 [29.4]~~.

TO:

BIOL 4002 Field Studies in Zoology

30 hours lecture, 60 hours fieldwork and laboratory work; 4 credits

Field studies of animals in their natural environments. Laboratory work. Summer session.

Prerequisite: Biology 1001 and Biology 1002

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

REVISED

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites, corequisites and description

FROM:

BIOL 4003 Field and Laboratory Methods in Ecology

4 hours laboratory including supervised fieldwork; 2 credits

Introduction to field and laboratory methods in ecology, with focus on nearby ecosystems, including Jamaica Bay. One weekend all-day field trip required. Students work as a research team on field and laboratory projects. Grades based on individual student reports on team projects. (Students registering for Biology 4003 ~~{63.4}~~ must take Biology 3083 ~~{63}~~ concurrently.) (Not open to students who have completed Biology 3082 ~~{62.5}~~.)

Prerequisite: Biology 1002 ~~or all of Biology 1072 [29], 2071 [29.1], 1071; and Biology 3001~~

~~Prerequisite or corequisite: Biology 3002~~

TO:

BIOL 4003 Field and Laboratory Methods in Ecology

4 hours laboratory including supervised fieldwork; 2 credits

Introduction to field and laboratory methods in ecology, with focus on nearby ecosystems, including Jamaica Bay. One weekend all-day field trip required. Students work as a research team on field and laboratory projects. Grades based on individual student reports on team projects. (Students registering for Biology 4003 must take Biology 3083 concurrently.) (Not open to students who have completed Biology 3082)

Prerequisite: Biology 1001 and Biology 1002

Rationale: The course pre-requisites and description are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change to writing-intensive format and change in prerequisites

FROM:

BIOL 4010 Macromolecular Structure and Bioinformatics

3 hours, 3 credits

The fundamentals of biological macromolecular structures; an introduction to the computational tools important in determining biological functions. (This course is the same as Computer and Information Science 2810 [10.33].)

TO:

BIOL 4010W Macromolecular Structure and Bioinformatics

3 hours, 3 credits

The fundamentals of biological macromolecular structures; an introduction to the computational tools important in determining biological functions. (This course is the same as Computer and Information Science 2810W [10.33].) Writing-intensive course.

Prerequisites: English 1012; Biology 1001, Biology 1002, and permission of the instructor

Rationale:

Prerequisites have been updated in line with other electives in Biology.

This course as it is taught currently incorporates a large writing component and already includes all components of a writing intensive course. This change will allow biology students to get credit for the course as a writing-intensive course in their major.

- A. The course incorporates 5-6 low stakes writing assignments (called E-journals) that explore specific sub-topics learnt in class
- B. Various analyses assignments are written as sub-modules that incorporate research of the topic, analyses performed discussion of results and conclusions complete with citations.
- C. The course culminates in a term paper that is formatted as a manuscript for peer-review submission in a scientific journal based on organizing and revising the various sub-modules from 2. into a complete piece of research. This term paper is developed as several drafts with the final paper submitted for grading.
- D. The writing assignments reflect the needs of the biology major to prepare the students to present their research work in proper scientific format.

Writing-Intensive Objectives:

- 1. The ability to move from low stakes writing to more formal pieces (A to C)
- 2. The ability to reflect on one's learning and to understand difficult material (A)
- 3. The ability to organize according to a pattern that is appropriate to the discipline (B and C)

Methods of Assessment for Writing Components:

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

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The low stakes writing assignments are introduced earlier in the course and submitted for the feedback to the instructor to assess student's understanding of the topic relevant to the discipline. The sub-modules are introduced subsequently when the students are starting to synthesize the analyses they perform with the material being learnt. Each sub-module is graded and critiqued for areas of improvement in terms of content, writing for the discipline and overall quality of writing. Feedback from the submitted sub-modules is incorporated and individual sub-modules are organized and integrated into a first draft of a manuscript in the second half of the semester. A minimum of 2 more drafts are developed before submitting the final term paper for grading.

Date of department approval: February 10, 2015

WAC approval: February 11, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4011 Molecular Biology of Development

1 hour recitation, 3 hours lecture; 4 credits

Experimental and biochemical analysis of development of echinoderm, molluscan, and amphibian embryos. Biochemical analysis is primarily related to the replication, transcription, and translation of nucleic acids. Analysis of experimental design and interpretation of work in current literature with emphasis on experimental designs for future work.

Prerequisite: Biology 1002 ~~or 2074 [17.4]~~ and Chemistry *2500 ~~[50]~~ or 3510. The chairperson may waive Chemistry *2500 ~~[50]~~ or 3510 as a prerequisite of Biology 4011 ~~[27.5]~~ for students who received a grade of B or higher in Chemistry *2100 ~~[2]~~.

TO:

BIOL 4011 Molecular Biology of Development

1 hour recitation, 3 hours lecture; 4 credits

Experimental and biochemical analysis of development of echinoderm, molluscan, and amphibian embryos. Biochemical analysis is primarily related to the replication, transcription, and translation of nucleic acids. Analysis of experimental design and interpretation of work in current literature with emphasis on experimental designs for future work.

Prerequisite: Biology 1001, Biology 1002 and Chemistry 2500 or 3510. The chairperson may waive Chemistry 2500 or 3510 as a prerequisite of Biology 4011 for students who received a grade of B or higher in Chemistry 2100.

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4012 Medical Microbiology

3 hours; 3 credits

Microbes as disease agents. Examination of host-microbe interactions, the immune response, nature and mechanisms of infectious diseases, chemotherapy, drug resistance, and epidemiology.

Prerequisite: Biology 3003 ~~or permission of the chairperson.~~

TO:

BIOL 4012 Medical Microbiology

3 hours; 3 credits

Microbes as disease agents. Examination of host-microbe interactions, the immune response, nature and mechanisms of infectious diseases, chemotherapy, drug resistance, and epidemiology.

Prerequisite: Biology 1001, 1002 and Biology 3003.

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4013 Principles of Immunology

3 hours; 3 credits

The immune system; immunity; innate and adaptive immunity; antigen presentation; cellular and humoral immunity; tolerance; immune system disorders.

Prerequisite: Biology 3003.

TO:

BIOL 4013 Principles of Immunology

3 hours; 3 credits

The immune system; immunity; innate and adaptive immunity; antigen presentation; cellular and humoral immunity; tolerance; immune system disorders.

Prerequisite: Biology 1001, Biology 1002, and Biology 3003.

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 and 1002 are now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4015 Recombinant DNA Technology

2 hours lecture, 1 hour recitation; 3 credits

Introduction to recombinant DNA technology. Application to current biological research. Basic biological understanding that supports recombinant DNA laboratory technology.

Prerequisite: Biology 1002 ~~or both 2073 and 2074~~

TO:

BIOL 4015 Recombinant DNA Technology

2 hours lecture, 1 hour recitation; 3 credits

Introduction to recombinant DNA technology. Application to current biological research. Basic biological understanding that supports recombinant DNA laboratory technology.

Prerequisite: Biology 1001 and Biology 1002

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4016 Recombinant DNA Laboratory

4 hours laboratory; 2 credits

Central techniques used in recombinant DNA studies. Gene cloning.

Prerequisite or corequisite: Biology 4015 [~~55.4~~] and permission of the instructor.

TO:

BIOL 4016 Recombinant DNA Laboratory

4 hours laboratory; 2 credits

Central techniques used in recombinant DNA studies. Gene cloning.

Prerequisite: Biology 1001, and Biology 1002

Prerequisite or corequisite: Biology 4015 and permission of the instructor.

Rationale: The requirement of Biology 1001 and 1002 are now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4019 Animal Physiology

2 hours; 2 credits

Lecture survey of how basic physiological processes are influenced and controlled by the nervous and endocrine systems. The relationships between structure and function will be emphasized. A comparative approach using examples from different groups of vertebrate animals. Those physiological processes that do not come under direct neuroendocrine control will be contrasted with those that do.

Prerequisite: Biology 1002 ~~or both Biology *2073 [17] and 1072~~

TO:

BIOL 4019 Animal Physiology

2 hours; 2 credits

Lecture survey of how basic physiological processes are influenced and controlled by the nervous and endocrine systems. The relationships between structure and function will be emphasized. A comparative approach using examples from different groups of vertebrate animals. Those physiological processes that do not come under direct neuroendocrine control will be contrasted with those that do.

Prerequisite: Biology 1001 and Biology 1002

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4020 Plant Physiology

Lecture 2 hours lecture; 2 credits

Basic topics in plant physiology, including water household, mineral nutrition, respiration, photosynthesis, nitrogen and sulfur fixation, plant hormones and development, plant molecular biology, genetic engineering, and environmental physiology.

Prerequisite: Biology 1002 ~~or all of Biology *2073 [17], 1072 [29] and 1071 [34.1], and Chemistry *1100 [4].~~

TO:

BIOL 4020 Plant Physiology

Lecture 2 hours lecture; 2 credits

Basic topics in plant physiology, including water household, mineral nutrition, respiration, photosynthesis, nitrogen and sulfur fixation, plant hormones and development, plant molecular biology, genetic engineering, and environmental physiology.

Prerequisite: Biology 1001, Biology 1002 and Chemistry 1100

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4021 Plant Physiology - Laboratory

4 hours laboratory; 2 credits

Experiments designed to gain better understanding of fundamental questions encountered in plant physiology, covering topics such as water household, transport, photosynthesis, respiration, nitrogen fixation, and secondary metabolism.

Prerequisite: Biology 4020 [~~36-3~~].

TO:

BIOL 4021 Plant Physiology - Laboratory

4 hours laboratory; 2 credits

Experiments designed to gain better understanding of fundamental questions encountered in plant physiology, covering topics such as water household, transport, photosynthesis, respiration, nitrogen fixation, and secondary metabolism.

Prerequisite: Biology 1001, Biology 1002 and Biology 4020

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 and 1002 are now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4022 Biotechnology of Algae

2 hours lecture; 2 credits

Phylogeny, evolution, habitats, growth cycles, and genetic engineering of algae; biosynthetic pathways of algal products and their metabolic regulation; interdisciplinary topics such as designing bioreactors and nutritional sciences including values of natural products. The economic aspect of patent law and management of companies dealing with algae will be covered.

Prerequisite: Biology 1002 ~~or 1072 [29]~~ and Chemistry ~~*1100 [1]~~.

TO:

BIOL 4022 Biotechnology of Algae

2 hours lecture; 2 credits

Phylogeny, evolution, habitats, growth cycles, and genetic engineering of algae; biosynthetic pathways of algal products and their metabolic regulation; interdisciplinary topics such as designing bioreactors and nutritional sciences including values of natural products. The economic aspect of patent law and management of companies dealing with algae will be covered.

Prerequisite: Biology 1001, Biology 1002 and Chemistry 1100

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change to writing-intensive format and change in prerequisites

FROM:

BIOL 4024 Cancer Biology

3 hours, 3 credits

Bulletin Description: How a tumor cell is formed and progresses. The roles of inherent tumor-suppressor genes in killing cancer cells. Students will get an opportunity to learn molecular mechanisms of a cancer cell and develop an interest in basic or therapeutic cancer research.

Prerequisites and/or co-requisites: Biology 2010 or 3011.

TO:

BIOL 4024W Cancer Biology

3 hours, 3 credits

Bulletin Description: How a tumor cell is formed and progresses. The roles of inherent tumor-suppressor genes in killing cancer cells. Students will get an opportunity to learn molecular mechanisms of a cancer cell and develop an interest in basic or therapeutic cancer research.
Writing-intensive course.

Prerequisites and/or co-requisites: English 1012; Biology 1001 and 1002, and Biology 2010 or 3011.

Rationale:

Prerequisites for the course have been updated in line with other electives in Biology. This course already had writing components built into it as an integral component since it was established. This is a proposed change in the course to formalize it with all the requirements need to make it a writing-intensive course for the major. Students are required to submit two **Critical Summary Write-ups** of selected peer-reviewed scientific articles. The total 10 pages of write-up per summary include:

- a) *Broader scientific interest - introduction to the subject matter* (1 page)
- b) *Critical analyses of the selected articles and how this research has moved the field forward-scientific impact* (3 pages)
- c) *Research Proposal for “future work”-what is needed in the field to answer specific questions i.e. a hypothesis driven full proposal that includes an objective, approach and significance* (6 pages).

A. The course requires students to submit the first draft of parts a) and b) of each summary to get **feedback from the instructor** to ensure that the topic/articles chosen are relevant and suitable for the level of the course and content is along the lines of what is expected. (This will not be graded).

B. The students will then have a chance to complete their write-up and get a **second round of feedback from their class-mates** (This will also not be graded).

C. The completed summaries will go through at least 2 revisions and finally submitted to “SafeAssign” for grading.

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

D. This course is an elective for all majors and will fulfill the writing-intensive requirement for their major in Biology. Writing is embedded as a tool in the course for understanding the discipline. The writing assignments reflect one of the major educational goals of the Biology program i.e. to prepare students for postgraduate education/training and for their future success in various professions.

Writing-Intensive Objectives:

1. The ability to move from low stakes writing to more formal pieces (A to C)
2. The ability to organize according to a pattern that is appropriate to the discipline (B, C)
3. The ability to develop ideas by using supportive evidence appropriate to the discipline (A,B, C)

Outcomes Assessment for Writing Components:

The first draft submitted for feedback from the instructor will assess the student's understanding of the topic relevant to the discipline (Cancer Biology). The peer review of a complete draft will allow the students to get feedback from each other regarding organization and help develop their ideas on the research proposal. The revisions of the write-ups incorporating instructor feedback both on "Organization" and feasibility of the "Research Proposal" on the subject chosen will allow for the development of a fully refined critical summary.. Rubrics for "How to write a critical summary" and "How to review a scientific write-up" will be provided and grading will be based on how well each of the objectives in the rubric is addressed.

Date of departmental approval: February 10, 2015

Date of WAC approval: February 11, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 4080 Ecology and Evolution

3 hours; 3 credits

Introduction to ideas and models of evolutionary ecology. Emphasis on natural selection and other processes in explaining structures and functions of populations, communities, ecosystems. (Not open to students who have completed Biology 3006 or 3007W.)

Prerequisite: Biology 1002

TO:

BIOL 4080 Ecology and Evolution

3 hours; 3 credits

Introduction to ideas and models of evolutionary ecology. Emphasis on natural selection and other processes in explaining structures and functions of populations, communities, ecosystems. (Not open to students who have completed Biology 3006 or 3007W.)

Prerequisite: Biology 1001 and Biology 1002

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 5001 Laboratory Research I

Minimum of 9 hours conference and independent work§; 3 credits each term

Independent laboratory research under the supervision of a Brooklyn College faculty member, (Not open to students who are enrolled in Biology 5010 - 5013.)

Prerequisite: ~~One of the following:~~ Biology 1002, ~~2074, 3002, 3004;~~ and permission of the sponsoring faculty member and department chairperson.

TO:

BIOL 5001 Laboratory Research I

Minimum of 9 hours conference and independent work§; 3 credits each term

Independent laboratory research under the supervision of a Brooklyn College faculty member, (Not open to students who are enrolled in Biology 5010 - 5013.)

Prerequisite: Biology 1001 and Biology 1002 and permission of the sponsoring faculty member and department chairperson.

Rationale: The course pre-requisites are updated to remove courses that are no longer offered and the requirement of Biology 1001 is now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 5003W Laboratory Research, writing intensive

Minimum of 9 conference and independent work§, 3 credits

Writing Intensive Research in Biology under the supervision of a Brooklyn College faculty member. (Not open to students who are enrolled in Biology 5010-5014W.) Writing Intensive course; Biology majors must complete at least one writing intensive W course in the department.

Prerequisites: English 1012; ~~At least one of the following: Biology 1001, 1002, 2074, 2071, 3002, 3004;~~ and permission of the sponsoring faculty member and department chairperson.

TO:

BIOL 5003W Laboratory Research, writing intensive

Minimum of 9 conference and independent work§, 3 credits

Writing Intensive Research in Biology under the supervision of a Brooklyn College faculty member. (Not open to students who are enrolled in Biology 5010-5014W.) Writing Intensive course; Biology majors must complete at least one writing intensive W course in the department.

Prerequisites: English 1012; Biology 1001, 1002, Biology 5001, and permission of the sponsoring faculty member and department chairperson.

Rationale: The course pre-requisites are changed to reflect updated pre-requisites and the requirement of Biology 1001 and 1002 are now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 5010 Independent Laboratory Research I

Minimum of 9 hours conference and independent work§; 3 credits each term

Independent laboratory research under the supervision of a Brooklyn College faculty member. Weekly conference. Thesis or report.

Prerequisite: Completion of at least two advanced Biology Department electives with a grade of A or B in each; ~~or any two of the following: Biology 2074, 3002, 3004, with a grade of A or B in each;~~ and permission of the instructor and the chairperson.

TO:

BIOL 5010 Independent Laboratory Research I

Minimum of 9 hours conference and independent work§; 3 credits each term

Independent laboratory research under the supervision of a Brooklyn College faculty member. Weekly conference. Thesis or report.

Prerequisite: Biology 1001, 1002, 5001 and completion of at least two advanced Biology Department electives with a grade of A or B in each; and permission of the instructor and the chairperson.

Rationale: The course pre-requisites are changed to reflect updated pre-requisites. Old and obsolete courses have been removed.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 5014W Honors Laboratory Research in Biology, writing intensive

Minimum of 9 conference and independent work§, 3 credits

Writing Intensive Independent Honors Research in Biology under the supervision of a Brooklyn College faculty member, Writing Intensive course; Biology majors must complete at least one writing intensive W course in the department. (Not open to students who are enrolled in Biology 5001, 5002, or 5003W.)

Prerequisites: English 1012; Both Biology 1001 and Biology 1002; and any two advanced biology courses with grades of B or better and permission of the sponsoring faculty member and department chairperson.

TO:

BIOL 5014W Honors Laboratory Research in Biology, writing intensive

Minimum of 9 conference and independent work§, 3 credits

Writing Intensive Independent Honors Research in Biology under the supervision of a Brooklyn College faculty member, Writing Intensive course; Biology majors must complete at least one writing intensive W course in the department. (Not open to students who are enrolled in Biology 5001, 5002, or 5003W.)

Prerequisites: English 1012; Both Biology 1001 and Biology 1002; Biology 5001 and any two advanced biology courses with grades of B or better and permission of the sponsoring faculty member and department chairperson.

Rationale: The course prerequisite is updated to include a prior independent research course for the honors research

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Biology

Change in prerequisites

FROM:

BIOL 5020 Colloquium

Minimum of 9 hours recitation, conference, and independent work§; 3 credits each term

Intensive reading in and group discussion of a special field. Students should consult department bulletin boards for current offerings. A term report or examination may be required.

Prerequisite: completion of an approved program of advanced Biology Department courses and permission of the chairperson.

TO:

BIOL 5020 Colloquium

Minimum of 9 hours recitation, conference, and independent work§; 3 credits each term

Intensive reading in and group discussion of a special field. Students should consult department bulletin boards for current offerings. A term report or examination may be required.

Prerequisite: Biology 1001, 1002 and completion of an approved program of advanced Biology Department courses and permission of the chairperson.

Rationale: The course pre-requisites are updated so requirements of Biology 1001 and 1002 are now stated explicitly to address any confusion with transfer credits.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Chemistry

Change in prerequisites and description

FROM:

CHEM 4570 Biochemistry I

3 hours lecture, 4 hours laboratory; 5 credits

Properties and reactions of compounds of biological importance. Oxygen-transport proteins. Enzyme kinetics and mechanisms. Basic immunology. Biological membranes. DNA replication, mutation, and repair. Transcription and the Genetic Code. Protein biosynthesis. Laboratory work emphasizes basic biochemical skills. (Not open to students who are enrolled in or have completed Chemistry 4571.)

Prerequisite: ~~Chemistry 3410 or 3415W~~ or Biology 2074 or Biology 1002.

Prerequisite or corequisite: Chemistry 3520 or both 3521 and 3522

TO:

CHEM 4570 Biochemistry I

3 hours lecture, 4 hours laboratory; 5 credits

Properties and reactions of compounds of biological importance. Oxygen-transport proteins. Enzyme kinetics and mechanisms. Basic immunology. Biological membranes. DNA replication, mutation, and repair. Transcription and the Genetic Code. Protein biosynthesis. Laboratory work emphasizes basic biochemical skills. (Not open to students who are enrolled in or have completed Chemistry 4571 or 4572.)

Prerequisite: Biology 2074 or Biology 1002.

Prerequisite or corequisite: Chemistry 3520 or both 3521 and 3522.

Rationale: In order to simplify administrative issues related to the biochemistry laboratory, Chemistry 4570 (a combined lecture and laboratory course) will be discontinued and the laboratory and lecture components of the course will be formally listed as separate courses. Coordination of the curriculum will be unchanged. This change serves the interest of students by permitting them to repeat the laboratory course, if necessary, without repeating the lecture. Also, providing separate grades for lecture and laboratory work permits more accurate reporting of assessment of the quality of student work (which may be very high in one and low in the other).

Instructors for the course have determined the analytical chemistry, (Chem 3410/Chem 3415W) is not really necessary for student success in the course, and the pre-requisite is being dropped. The department does not anticipate future offerings of Chem 4570, but the change is included to leave the option open should some reason to do so arise.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Computer and Information Science

Change to writing-intensive format and change in prerequisites

FROM:

CISC 2810 Macromolecular Structure and Bioinformatics

~~3 hours lecture, 3 credits~~

Bulletin Description: The fundamentals of biological macromolecular structures; an introduction to the computational tools important in determining biological functions. (This course is the same as Biology 4010.)

~~Prerequisite: Core Curriculum 1312 [3.12] or Core Studies 5.1 or Computer and Information Science 1000 [1.0] or Computer and Information Science 1110 [1.5] or equivalent.~~

TO:

CISC 2810W Macromolecular Structure and Bioinformatics

3 hours, 3 credits

Bulletin Description: The fundamentals of biological macromolecular structures; an introduction to the computational tools important in determining biological functions. (This course is the same as Biology 4010W.) Writing-intensive course.

Prerequisites and/or co-requisites: English 1012; Biology 1001, Biology 1002, and permission of the instructor

Rationale:

This course as it is taught currently incorporates a large writing component and already includes all components of a writing intensive course. This change will allow CIS students to get credit for the course as a writing-intensive course in their major.

- E. The course incorporates 5-6 low stakes writing assignments (called E-journals) that explore specific sub-topics learnt in class
- F. Various analyses assignments are written as sub-modules that incorporate research of the topic, analyses performed discussion of results and conclusions complete with citations.
- G. The course culminates in a term paper that is formatted as a manuscript for peer-review submission in a scientific journal based on organizing and revising the various sub-modules from 2. into a complete piece of research. This term paper is developed as several drafts with the final paper submitted for grading.
- H. The writing assignments reflect the needs of the biology major to prepare the students to present their research work in proper scientific format.

Writing-Intensive Objectives:

- 4. The ability to move from low stakes writing to more formal pieces (A to C)
- 5. The ability to reflect on one's learning and to understand difficult material (A)

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

6. The ability to organize according to a pattern that is appropriate to the discipline (B and C)

Methods of Assessment for Writing Components:

The low stakes writing assignments are introduced earlier in the course and submitted for the feedback to the instructor to assess student's understanding of the topic relevant to the discipline. The sub-modules are introduced subsequently when the students are starting to synthesize the analyses they perform with the material being learnt. Each sub-module is graded and critiqued for areas of improvement in terms of content, writing for the discipline and overall quality of writing. Feedback from the submitted sub-modules is incorporated and individual sub-modules are organized and integrated into a first draft of a manuscript in the second half of the semester. A minimum of 2 more drafts are developed before submitting the final term paper for grading.

Date of department (program) approval: Feb 10, 2015

WAC approval: February 11, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Core Curriculum

Change in prerequisites

FROM:

CORC 3320 Space-Time, Gravity, and the Quantum: The Role of Einstein in the Birth of Modern Physics

3 hours; 3 credits

A biographical treatment of the life of Albert Einstein, with emphasis on the scientific breakthroughs and struggles which formed his major contributions to modern science. His interactions with the other giants of 20th century physics, both personal and intellectual. The evolution of his political and social views, and how they paralleled that of his scientific thinking. The impact of his image as the leading iconic symbol of 20th century science.

TO:

CORC 3320 Space-Time, Gravity, and the Quantum: The Role of Einstein in the Birth of Modern Physics

3 hours; 3 credits

A biographical treatment of the life of Albert Einstein, with emphasis on the scientific breakthroughs and struggles which formed his major contributions to modern science. His interactions with the other giants of 20th century physics, both personal and intellectual. The evolution of his political and social views, and how they paralleled that of his scientific thinking. The impact of his image as the leading iconic symbol of 20th century science.

Prerequisite: Junior standing.

Rationale: the required prerequisite for 3000 level CORC courses was left off by mistake

Date of Core Committee approval: March 1, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Economics

Change in prerequisites

FROM:

ECON 3320 Money and Banking

3 hours; 3 credits

The nature of money, the monetary system, and monetary standards. Commercial banking operations and noncommercial banking institutions. Relationship of money and banking to prices and economic activity. (This course is the same as Business 3320 [70.1].)

Prerequisite: Economics 2100 [10.1]

TO:

ECON 3320 Money and Banking

3 hours; 3 credits

The nature of money, the monetary system, and monetary standards. Commercial banking operations and noncommercial banking institutions. Relationship of money and banking to prices and economic activity.

Prerequisite: Economics 2100 [10.1] or Economics 2200 [20.1].

Rationale: Money and Banking pre-supposes that the student has completed a principles of economics course. This allows the student flexibility in taking either elementary macroeconomics or elementary microeconomics as a pre-requisite.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Earth and Environmental Sciences

Change in hours and description

FROM:

EESC 3800 Statistics and Data Analysis in Geosciences

3 hours lecture; 3 credits

Introduction to descriptive statistics in geological and geophysical contexts such as population and samples, random sampling, probability, normal distribution, types of errors; to the science of statistics description. Making inferences from numbers measured on samples, such as linear regression, analysis of variance, multiple regression, polynomial regression, cluster analysis. Data analysis in earth sciences presented on four different scales (nominal, ordinal, interval, and ratio). Graphical and numerical techniques for representation and analysis. Most examples will be worked using popular software, such as EXCEL(~~r~~), MINITAB(~~r~~), STATISTICA(~~r~~), ~~ORIGIN(r)~~ or ~~MATLAB(r)~~. STEM variant course - Satisfies Pathways Required Core Math and Quantitative Reasoning requirement.

Prerequisite: Earth and Environmental Sciences 1101 or 1201

TO:

EESC 3800 Statistics and Data Analysis in Geosciences

2 hours lecture, 2 hours lab; 3 credits

Introduction to descriptive statistics in geological and geophysical contexts such as population and samples, random sampling, probability, normal distribution, types of errors; to the science of statistics description. Making inferences from numbers measured on samples, such as linear regression, analysis of variance, multiple regression, polynomial regression, cluster analysis. Data analysis in earth sciences presented on four different scales (nominal, ordinal, interval, and ratio). Graphical and numerical techniques for representation and analysis. Most examples will be worked using popular software, such as EXCEL and SPSS. STEM variant course - Satisfies Pathways Required Core Math and Quantitative Reasoning requirement.

Prerequisite: Earth and Environmental Sciences 1101 or 1201

Rationale: The software deleted from the initial course description is not appropriate for this course or is not available on our campus. Lecture presentation is insufficient for training students to perform statistical analyses. A 2-hours lab is necessary for practical teaching and training with computational software.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

REVISED

SECTION A-V: CHANGES IN EXISTING COURSES

Department of Political Science

Change in course title

FROM:

POLS *1004 ~~Thinking Politics~~

4 hours; 4 credits

Introduction to most important questions of political theory, including the meaning of justice, obedience and opposition to authority, the relationship between law and violence, justification of war, sovereignty and political exclusion. Classic texts organized around a particular theme. Close reading and intensive reading.

TO:

POLS *1004 The Political Imagination: Introduction to Political Theory

4 hours; 4 credits

Introduction to most important questions of political theory, including the meaning of justice, obedience and opposition to authority, the relationship between law and violence, justification of war, sovereignty and political exclusion. Classic texts organized around a particular theme. Close reading and intensive reading.

Rationale: New title better conveys course content and relationship to traditional subfields of political science than did previous course title.

Date of departmental approval: November 11, 2014

Effective date: Fall 2015

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

SECTION A-VI: OTHER CHANGES

**Department of Biology
Change in biology minor**

Biology Minor

Department Requirements (12 credits)

Both Biology 1001 and 1002 are required for the minor, or all of the following courses: Biology 1071 or 4010, 1072, 2071, 2073, 2074. However, the credits from these courses do not count towards the department requirement of 12 credits to receive a minor.

Any two of the following elective courses: Biology 4001, 4002, 4010 or Computer and Information Science 2810, Biology 2001, 4011, 4012, 4016, 3006 or 3007W, 3001, 3003, 4013, 4015, 4022, 3083, 5020, 2010; Biology 2020 or Psychology 2610, Biology 3020/ Psychology 3610, Biology 3030W, Biology 3011.

At least 12 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, 5000W or 5001 or 5003W or 5010 or 5014W, Biology 5020, Chemistry 4581.

Each course must be completed at Brooklyn College with a grade of C- or higher.

Date of departmental approval: February 10, 2015

Effective date: Fall 2015

Rationale:

1. Old and obsolete courses have been removed.
2. The electives in the minor have been updated and synced with those of the major

SECTION A-VI: OTHER CHANGES
Department of Political Science
Change in department honors policy

Departmental honors

Students who want to qualify for honors in political science must have:

- 1) an average of 3.50 or higher in all political science courses, except Political Science 1001, ~~or 1002, 1003, 1004, 1005, 1006~~;
- 2) a grade of B+ ~~A-~~ or higher in the capstone seminar, POLS 4000W;
- 3) a grade of no less than a A-B+ in an honors independent studies course (5001 or 5002) or a grade of no less than A- ~~in honors credit~~ in an advanced elective taken for honors credit.

All course work eligible for consideration for departmental honors must be taken at Brooklyn College.

Date of departmental approval: November 11, 2014

Effective date: Fall 2015

Rationale:

These changes will allow students who have received a B+ in one of our very rigorous capstone seminars to be eligible for honors. It raises performance requirements in independent study courses, reflecting that students have greater freedom to choose the subject of study during these courses, and thus should perform at a higher level. Both of these requirements are above the level stipulated by Brooklyn College requirements for honors degrees in a major. This shift also puts requirements for department honors closer to those stipulated by other departments that specify grades for particular courses, including Classics, Speech, English and Judaic Studies. The change also clarifies that grades from the new introductory courses (1003, 1004, 1005, and 1006) do not count in the determination of departmental honors.

SECTION A-VI: OTHER CHANGES

Department of Puerto Rican and Latino Studies

Change in concentration(s) for majors in early childhood and childhood education teacher programs

Concentration(s) for majors in early childhood and childhood education teacher programs

Puerto Rican and Latino Studies

The requirements for the teacher education programs indicated above are described in the Early Childhood and Art Education and the Childhood, Bilingual, and Special Education sections of this Bulletin. Students who major in either of these programs and who elect a concentration in Puerto Rican and Latino studies must complete 31 credits in the Puerto Rican and Latino Studies Department with a grade of C or higher in each course. Students must meet with a department adviser to declare their intention to complete this sequence.

Concentration requirements:

All of the following courses: Puerto Rican and Latino Studies 1001, 2005, 3325, and 4420. Six of the following courses: Puerto Rican and Latino Studies 2300, 2320, 3105, 3120, 3125, 3205 through 3320W, 3330, 4450, 4510, 4615, 4635, 4640, 4645.

With permission of the departmental curriculum committee, appropriate PRLS course substitutions are allowed in the concentration under special circumstances.

Puerto Rican and Latino Studies - Bilingual

The requirements for the childhood education teacher (grades 1-6) with an extension of the certificate for bilingual (Spanish-English) education program is described in the section of the Undergraduate Bulletin relating to the Department of Childhood, Bilingual and Special Education. Students who major in this program must complete 31 credits in the Puerto Rican and Latino Studies Department with a grade of C or higher in each course. Students must meet with a department adviser to declare their intention to complete this sequence.

Concentration requirements:

Puerto Rican and Latino Studies 2005, 4410, 4415, 4420, 4425, 4430.

Three of the following courses: Puerto Rican and Latino Studies 1001, 2300, 2320, 3105, 3120, 3125, 3205, 3210, 3215, 3220, 3315 (same as Africana Studies 3240 and Comparative Literature 3623), 3320W, 3325, 4450, 4510, 4615, 4635, 4640, 4645.

With permission of the departmental curriculum committee, appropriate PRLS course substitutions are allowed in the concentrations under special circumstances.

Date of departmental approval: February 19, 2013

Effective date: Fall 2015

Rationale:

Material located with ~~strike-through~~ is to be deleted and material underlined is to be added

The Department is updating the requirements in the two PRLS-Education concentrations in order to reflect the recent addition to our course offerings of PRLS 2320 “Afro-Latin@s: Black, Latin@, or Both?” (3 credits). This addition does not change, but rather fits in with, the following overall programmatic goals:

- Goal #1: To develop a contextual understanding of Puerto Rico, U.S. Puerto Ricans/ Latin@s/Hispanics, the Caribbean and/or Latin America.
- Goal #2: To develop an understanding of the dynamics of diversity in a globally interdependent world.