BROOKLYN COLLEGE

OF

THE CITY UNIVERSITY OF NEW YORK

FACULTY COUNCIL

Meeting of November 8, 2016

The Committee on Undergraduate Curriculum and Degree Requirements herewith submits its recommendations in Curriculum Document 383.

Respectfully submitted,

Sharon Beaumont-Bowman	(Speech Communication Arts and Sciences)
Douglas Cohen	(Conservatory of Music, Chair)
Xia Li	(Early Childhood Education/Art Education)
Stanley Peterburgsky	(Finance)
Anjana Saxena	(Biology)

Members of Faculty Council with any questions are urged to contact Douglas Cohen at dcohen@brooklyn.cuny.edu or (718) 951-5945 prior to the meeting.

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SECTION A-III: CHANGES IN DEGREE PROGRAMS
Department of Finance

B.B.A. degree program in finance
HEGIS code 0506; SED program code 37634

Department requirements (56-58 credits)

A. Business Core (38-40 credits)

Students must complete all of the following:
Accounting 2001 and Accounting 3201, Computer and Information Science 1050 or Computer and Information Science 1110, Business 2100 or
Economics 2100, Business 2200 or Economics 2200, Business 3400 or Economics 3400 or Mathematics 2501 or Mathematics 3501 or Psychology
3400, Business 3410 or Economics 3410 or Mathematics 1201, Business 3430 or Computer and Information Science 2531, Business 3100, Business 3200, Finance 3310 or [Business 3310], Philosophy 3314

B. Required Finance Courses (9 credits)

Students must complete all of the following:
Finance 3330 or [Business 3330]; Finance 4300W or [Business 4300W]; and Finance 3311 or [Business 3311].

C. Electives (9 credits)

Students should complete any three of the following:
Business 3320 or Economics 3320; Finance 3340 or Business 3340; Finance 3377 or Business 3377; Accounting 3021; Finance 5001; Finance 3350; Finance 3390; Finance 5102; Finance 5330

Rationale: When the Department of Finance started in Fall 2015, we had only two elective finance courses available for our students. To strengthen our curriculum, we are proposing four new finance courses and these new courses need to be added to our list of electives.

Date of departmental approval: October 13, 2016

Effective date: Fall 2017

SECTION A-III: CHANGES IN DEGREE PROGRAMS
Department of Physics

B.S. degree program in physics
HEGIS code 1902; SED program code 02070

Sequence for students planning graduate work toward a Ph.D. degree in physics or astronomy.

Department requirements (~~66~~69 credits)

To enroll in advanced physics courses, students must earn a grade of C or higher in the physics and mathematics prerequisites of the courses, unless they are excused from this requirement by the chairperson. A student who receives a grade of C- or lower in a required physics or mathematics course must consult the chairperson before registering for another physics course. The student is usually advised to repeat the course.

All of the following: Physics 1150, 2150, 3100, 4000, 3900, 3950, ~~3350~~3300, 4100, 4200, 4300, 4350, 4900W; Chemistry 1100 and 2100; Computer and Information Science 1110 or ~~1.10 or 1.20~~ 1115; Mathematics 1201~~ and~~, 1206~~ and~~, 2101, 2201,~~ and~~ 2206~~.~~

Additional requirements for a B.S. degree

Candidates for a B.S. degree with a major in physics must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the Physics Department. These 24 credits must be completed at Brooklyn College with a grade of C or higher in each course.

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 science, mathematics, physics, and
psychology.
B) Courses marked with a number sign (#) in the Department of Health and Nutrition Sciences.
C) ---Anthropology and Archaeology 2200, 3199, 3230, 3240, 3250, 3260, 3265, 3266, 3425, 3440, 3470, 4665.
---Core Studies 5, 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 Department of Physics does not have enough students to run separate electric circuits courses for its physics majors and its Coordinated Engineering Program students. For the past decade, we have had our physics majors take Physics 3300, the course for our engineering students. The physics majors then obtained letters from our Chair approving its

substitution for the required Physics 3350. This curriculum change recognizes once and for all that physics majors take Physics 3300 rather than Physics 3350. The change will simplify the process by which our majors meet their degree requirements. Physics 3300 is taught in a manner that satisfies the needs of both our engineering students and our physics majors.

The Department of Physics is now listing Math 2101 Linear Algebra I as an explicit requirement for its B.S. major. This course has been a hidden requirement of our major for the past several years, ever since the Department of Mathematics made Math 2101 a co- or prerequisite for Math 2206 Introduction to Differential Equations. Math 2206 has been a requirement of our major all along.

The Department of Physics is modifying its requirement in Computer and Information Science to reflect upcoming changes in the CIS curriculum.

Date of departmental approval: September 6, 2016

Effective date: Fall 2017

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 (30-36 credits)

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1. ~~Political Science 1001, 1002, 1003, 1004, 1005, 1006 or 1007.~~One 1000-level Political Science course.

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, or 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. Only one course numbered 3603-3651 may be included, with the exception of 3650. After satisfying the requirement in part 2 above students may take additional 3000-level writing-intensive seminars to satisfy this requirement.

Rationale: The first change is a simple housekeeping change that will allow us to add new introductory 1000-level courses without changing the degree requirements. The second change allows the students accepted into the prestigious Albany internship program (about one or two students per year) to have those legislative internship courses (POLS 3601, POLS 3602) count for the major. The second change also gives students more options for taking an internship course and having it count toward their major. Currently, of the New York City-based internship courses, only POLS 3651 can be included in the major. As a result of this change, students may count one of the three New York City based internship courses toward the major.

The mission of the Political Science Department is to help our students develop an understanding of the structures and operations of politics and power so that they can become engaged and critical thinkers. Our research and course offerings range from local to global, from theory to policy, from the state to the grassroots. Allowing students to use real-world internship experience, conducted under the supervision of a faculty member, to count these credits toward major will help us fulfill this mission.

Date of departmental approval: October 13, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Department of Chemistry

CHEM 1037 Studies in Forensic Science

3 hours; 3 credits

Introduction to forensic science, including modern techniques of forensic analysis. Topics will include both legal and scientific issues related to the collection, preservation and analysis of physical evidence associated with legal proceedings. Social and ethical questions that arise from these issues will also be considered. The course will make extensive use of authentic criminal case studies.

Prerequisite: None

Contact hours: 3

Frequency of offering: one section per year

Projected enrollment: 40 students

Clearance: Anthropology

Rationale: This submission represents a re-creation of CORC 3307, which is no longer offered as a result of changes to the General Education Curriculum. The course seeks to highlight the role of natural science in forensic analysis, with the goal of informing students about both physical principles and legal issues. Key themes for the course include the nature of both legal and scientific evidence and the means by which both are analyzed in the criminal justice system.

Date of departmental approval: September 22, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Department of Computer and Information Science

CISC *1113 Basic Principles of Java Programming with Science Applications I

4 hours; 2 credits

Algorithms, computers and programs. Writing, debugging, and testing programs. Loops and conditional control structures. Method definition and parameter passing. Basic concepts of computer science. Programming applications selected from mathematics, physics, biology and chemistry. (Open only to students in an Early College High School program.)

Prerequisite: None

Contact hours: 4

Frequency of offering: every fall semester

Projected enrollment: one section of 25 students annually

Clearance: None

Rationale: In the C++ based introductory sequence, the introductory course CISC 1110 was offered to qualifying high school students in a two-semester sequence: CISC 1111/CISC 1112. Now that CISC 1110 is to be replaced by the Java-based CISC 1115, it is necessary to replace CISC 1111/CISC 1112 by CISC 1113/CISC 1114, which are their Java analogs.

Date of departmental approval: April 12, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Department of Computer and Information Science

CISC *1114 Basic Principles of Java Programming with Science Applications II

4 hours; 2 credits

Review of method definition and parameter passing. Arrays, ArrayLists, and Strings. Sorting, searching and other basic algorithms. Programming applications selected from mathematics, physics, biology and chemistry. (Open only to students in an Early College High School program.)

Prerequisite: Computer and Information Science 1113

Contact hours: 4

Frequency of offering: every spring semester

Projected enrollment: one section of 25 students annually

Clearance: None

Rationale: In the C++ based introductory sequence, the introductory course CISC 1110 was offered to qualifying high school students in a two-semester sequence: CISC 1111/CISC 1112. Now that CISC 1110 is to be replaced by the Java-based CISC 1115, it is necessary to replace CISC 1111/CISC 1112 by CISC 1113/CISC 1114, which are their Java analogs.

Date of departmental approval: April 12, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Department of Computer and Information Science

CISC *1115 Introduction to Programming Using Java

3 hours lecture, 2 hours lab; 4 credits

Algorithms, computers and programs. Writing, debugging, and testing programs. Loops and conditional control structures. Method definition and parameter passing. Arrays, ArrayLists, and Strings. Sorting, searching and other basic algorithms. Input and output. Programming applications selected from various disciplines. History and basic concepts of computer science. (Not open to students who have completed Computer and Information Science 1110 [1.5].)

Prerequisite: None

Contact hours: 5

Frequency of offering: every semester, winter and summer session

Projected enrollment: 30 sections of 35 students annually

Clearance: None

Rationale: This course is part of a shift from using the C++ programming language to the Java programming language in the early courses of the computer science major sequence. Java offers several advantages over C++. Because it was not developed with the constraint of backward compatibility with a large existing code base, it avoids many of the pedagogically troubling inconsistencies and anomalies of C++. It offers a simpler model for object-oriented programming, the leading contemporary programming paradigm. It offers a more accessible path for students to develop graphical user interfaces, do network programming, database programming and graphics. Finally, starting with Java places the student in the middle of the current spectrum of programming language semantics, rather than at one extreme or the other.

Date of departmental approval: April 12, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Department of Computer and Information Science

CISC 3115 Introduction to Modern Programming Techniques

4 hours; 4 credits

A second course in programming. Programming techniques emphasizing reliability, maintainability, and reusability. Multi-file programs. Abstract data types. Objects, classes, and object-oriented design. Test suites, test drivers, and testing strategies; debugging, assertions, and an introduction to formal techniques. Recursion, event-driven programming and threads, GUI programming, and simple network programming (Not open to students who are enrolled in or have completed Computer and Information Science 3110 [15].)

Prerequisite: Computer and Information Science 1115 or 1117

Contact hours: 4

Frequency of offering: every semester

Projected enrollment: 10 sections of 35 students annually

Clearance: None

Rationale: This course is part of a shift from using the C++ programming language to the Java programming language in the early courses of the computer science major sequence. Even more so than the new CISC 1115, this course, which replaces CISC 3110, takes advantages of Java's simpler model for object-oriented programming (OOP) to allow a more comprehensive treatment of OOP, including inheritance and polymorphism. It also takes advantages of the Java core libraries to introduce students to graphical user interface programming, concurrency, and the use of the collection hierarchy.

Date of departmental approval: April 12, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Department of Computer and Information Science

CISC 3142 Programming Paradigms in C++

3 hours; 3 credits

An introduction to C++ and its roles providing support for object-oriented programming, generic programming, procedural programming, and low-level programming. The C++ memory model, and topics in explicit memory management. Storage classes, scope, and compilation stages. The Standard Template Library. Comparison with Java. (Not open to students who have completed Computer and Information Science 3110.)

Prerequisite: Computer and Information Science 1115, 3130, and either 3310 or permission of the chairperson

Contact hours: 3

Frequency of offering: every semester

Projected enrollment: 2 sections of 40 students annually

Clearance: None

Rationale: With the adoption of Java as the introductory programming language in the program, students need an opportunity to study the C/C++ end of the programming language spectrum. This course builds on their knowledge of object oriented programming in Java, the facility with data structures and their knowledge of architecture to give them a level of sophistication in C++ programming that was heretofore unattainable.

Date of departmental approval: April 12, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Department of English

ENGL 2004 Literature and Film

3 hours; 3 credits

Exploration of the intersection of literature and film. Development of students' understanding of aesthetics of language and literature and acquaintance with new approaches to reading. Topics include narrative structure; character; setting; point of view; representation of emotion and thought. This course is the same as Classics 2104. (Not open to students who have completed Core Curriculum 3104.)

Prerequisite: English 1010 or permission of the department.

Contact hours: 3

Frequency of offering: every Fall semester

Projected enrollment: 1 section of 25 students

Clearance: Classics, Modern Languages

Rationale: This course was formerly CORC 3104. Under the new General Education framework, CORC courses developed and/or taught by multiple departments were submitted under just one department in 2015, with the agreement that the other department would submit a new course form the subsequent year (2016) and the course would then be cross-listed. CORC 3104 was originally developed by the English department and has been taught by Classics; it went into the new Gen Ed as CLAS 2104 on the first round. The English department is now submitting the same course as a new course, ENGL 2004, for the purposes of crosslisting as per the agreement in 2015.

Date of departmental approval: October 13, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Department of Finance

FINC 3350 Financial Institutions and Markets

3 hours; 3 credits

This course uses principles of finance and investments to help students understand modern financial markets and institutions. Central themes are the structure of financial markets, their pricing function, the interaction between financial markets and institutions, macroeconomic conditions, and the process of financial innovation and regulation in these markets. This course guides students through various markets and helps them analyze the asset and liability structures, and operations of financial institutions.

Prerequisite: Finance 3310

Contact hours: 3

Frequency of offering: Once per year

Projected enrollment: 25 students

Clearance: None

Rationale: This course will build upon core topics introduced in FINC 3310, such as determinants of interest rates and capital markets. It will enable students to develop a broad understanding of various financial markets and institutions as well as the role of financial markets and institutions in the economy. Students will also learn about the Federal Reserve System and its monetary policy, and the operations of depository and non-depository financial institutions. Ultimately the course will further student's knowledge of key finance concepts and provide a platform to excel in future finance classes and career development.

Date of departmental approval: October 13, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Department of Finance

FINC 3390 Financial Modeling

3 hours; 3 credits

The course takes a hands-on approach in building financial models for the purpose of financial management and investment valuation. The major topics include portfolio theory, measurements of asset risk and return, asset pricing models and valuation. Students will create numerous financial models, including graphical representations, using software such as Excel with real world data.

Prerequisite: Finance 3311 and 3330

Contact hours: 3

Frequency of offering: Once per year

Projected enrollment: 20 - 25 students

Clearance: None

Rationale: In this course, students will experience practical applications of finance theories and models they learned in prerequisite finance, accounting, economics and statistics courses. The course will serve the purpose of providing hands-on learning experience with financial models and enhancing the expertise of finance students in modeling based on MS Excel, a key tool in finance. This course emphasizes various computational Excel applications and numerical analyses that are close to the real-world examples in finance on the foundations of corporate finance, investment analysis, and derivatives.

Date of departmental approval: October 13, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Department of Finance

FINC 5330 Security Analysis

3 hours; 3 credits

Experiential learning of value investing using both long and short positions. Equity valuation models, financial statement analysis for stock valuation, evaluation of company strategies and management, and use of derivatives for portfolio risk management. Evaluation of performance and reporting. Writing comprehensive reports that align with investment thesis. Presentation of investment proposals and feedback by investment professionals

Prerequisite: Finance 3330 or 5102

Contact hours: 3

Frequency of offering: Once a year

Projected enrollment: 15 students

Clearance: None

Rationale: When the Department of Finance launched in Fall 2015, we only had an intro-level investments course, not a security analysis course. Therefore, we needed a new stock valuation course to help students fully utilize the experiential learning opportunity of real-world investing provided through M.D. SASS Investment Institute (MDSII). In order to develop this new course, our department offered a Special Topics in Security Analysis course in Spring 2016 and we plan to offer it again in Spring 2017. As this experiential learning opportunity is very valuable for our students, we need to continue offering this security analysis course and thus we propose it as a new course.

Date of departmental approval: October 13, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Faculty Council Committee on General Education

STGE 1010 Special Topics in General Education – Human and Cultural Diversity

3 hours; 3 credits

Contextualizes the variety of human experience in relation to contemporary political, social, and economic realities that may accompany differences in race, ethnicity, gender, sexual orientation, culture, and/or geography in the U.S. and two-thirds world countries. Prepares students to critically analyze the dynamics of an increasingly globalized, heterogeneous world.

Prerequisite: None

Contact hours: 3

Frequency of offering: Every year

Projected enrollment: 1 section of 25 students

Clearance: None

Rationale: The new general education framework includes the opportunity for experimental courses to be offered. This requires the creation of the STGE rubric, under which are to be grouped courses for each category, though faculty are encouraged to give these courses an interdisciplinary focus. Every general education course must substantially engage at least one of the goals and at least one of the skills listed in the framework adopted by Faculty Council on May 5, 2015. Each STGE course must be approved by the General Education Curriculum Committee.

Date of committee approval: October 17, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Faculty Council Committee on General Education

STGE 1020 Special Topics in General Education – Arts

3 hours; 3 credits

Develops students' understanding of creative activity as an expression of human experience within specific historical and social contexts. Hones sensitivity to the forms of artistic expression through intensive study of specific artworks, and/or through production/performance of original works. Fosters intellectual growth, self-awareness, and technical skill by integrating creativity and analysis.

Prerequisite: None

Contact hours: 3

Frequency of offering: Every year

Projected enrollment: 1 section of 25 students

Clearance: None

Rationale: The new general education framework includes the opportunity for experimental courses to be offered. This requires the creation of the STGE rubric, under which are to be grouped courses for each category, though faculty are encouraged to give these courses an interdisciplinary focus. Every general education course must substantially engage at least one of the goals and at least one of the skills listed in the framework adopted by Faculty Council on May 5, 2015. Each STGE course must be approved by the General Education Curriculum Committee.

Date of committee approval: October 17, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Faculty Council Committee on General Education

STGE 1030 Special Topics in General Education – Humanities and Social Sciences, Global Topics

3 hours; 3 credits

Examines human existence, individual and collective, through a variety of methodologies, viewing our world through many lenses to help students interpret and think critically about being human. The humanities employ mainly qualitative approaches to literary works, religious and philosophical conceptions, and historical records of peoples and regions of the world. The social sciences engage in the systematic study of power, at the level of personal interactions, the state, and society, using both qualitative and quantitative methods. These "ways of knowing" intersect and overlap, encouraging students to analyze the range of creativity, cultural expressions, modes of power, and patterns in human existence.

Prerequisite: None

Contact hours: 3

Frequency of offering: Every year

Projected enrollment: 1 section of 25 students

Clearance: None

Rationale: The new general education framework includes the opportunity for experimental courses to be offered. This requires the creation of the STGE rubric, under which are to be grouped courses for each category, though faculty are encouraged to give these courses an interdisciplinary focus. Every general education course must substantially engage at least one of the goals and at least one of the skills listed in the framework adopted by Faculty Council on May 5, 2015. Each STGE course must be approved by the General Education Curriculum Committee.

Date of committee approval: October 17, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Faculty Council Committee on General Education

STGE 1035 Special Topics in General Education – Humanities and Social Sciences, Selfhood

3 hours; 3 credits

Examines individualized human existence, in itself and in relation to the collective, through a variety of methodologies, viewing our world through many lenses to help students interpret and think critically about being human. The humanities employ mainly qualitative approaches to literary works, religious and philosophical conceptions, and historical records of peoples and regions of the world. The social sciences engage in the systematic study of power, at the level of personal interactions, the state, and society, using both qualitative and quantitative methods. These "ways of knowing" intersect and overlap, encouraging students to analyze the range of creativity, cultural expressions, modes of power, and patterns in human existence.

Prerequisite: None

Contact hours: 3

Frequency of offering: Every semester

Projected enrollment: 1 section of 25 students

Clearance: None

Rationale: The new general education framework includes the opportunity for experimental courses to be offered. This requires the creation of the STGE rubric, under which are to be grouped courses for each category, though faculty are encouraged to give these courses an interdisciplinary focus. Every general education course must substantially engage at least one of the goals and at least one of the skills listed in the framework adopted by Faculty Council on May 5, 2015. Each STGE course must be approved by the General Education Curriculum Committee.

Date of committee approval: October 17, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Faculty Council Committee on General Education

STGE 1040 Special Topics in General Education – Quantitative, Computational, and Mathematical Reasoning

3 hours; 3 credits

Develops at least two of the following four skills: formal reasoning (the use of formal logic or mathematics); abstract representation (the production and interpretation of information using mathematical models such as formulas, graphs, tables, and schematics); empirical analysis (the use of statistical inference, e.g., statistical modeling through sampling of populations or phenomena); and computational reasoning (identification of problems and solutions through the design of algorithms).

Prerequisite: None

Contact hours: 3

Frequency of offering: Every year

Projected enrollment: 1 section of 25 students

Clearance: None

Rationale: The new general education framework includes the opportunity for experimental courses to be offered. This requires the creation of the STGE rubric, under which are to be grouped courses for each category, though faculty are encouraged to give these courses an interdisciplinary focus. Every general education course must substantially engage at least one of the goals and at least one of the skills listed in the framework adopted by Faculty Council on May 5, 2015. Each STGE course must be approved by the General Education Curriculum Committee.

Date of committee approval: October 17, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Faculty Council Committee on General Education

STGE 1050 Special Topics in General Education – Natural and Behavioral Science

3 hours; 3 credits

Courses in this area develop one or more of the following four skills: quantitative description and synthesis of theories of natural phenomena; methods for generating and empirically assessing the validity of hypotheses about such phenomena; understanding of key scientific ideas of the modern world; theory, methods, and practice of statistical and experimental analysis of human and nonhuman animal behavior and psychology.

Prerequisite: None

Contact hours: 3

Frequency of offering: Every year

Projected enrollment: 1 section of 25 students

Clearance: None

Rationale: The new general education framework includes the opportunity for experimental courses to be offered. This requires the creation of the STGE rubric, under which are to be grouped courses for each category, though faculty are encouraged to give these courses an interdisciplinary focus. Every general education course must substantially engage at least one of the goals and at least one of the skills listed in the framework adopted by Faculty Council on May 5, 2015. Each STGE course must be approved by the General Education Curriculum Committee.

Date of committee approval: October 17, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Faculty Council Committee on General Education

STGE 1060 Special Topics in General Education – Laboratory-based Natural and Behavioral Science

3 hours; 3 credits

Combines laboratory-based data collection, analysis, and synthesis to formulate an understanding of the physical laws that govern the behavior and properties of materials and/or living systems.

Prerequisite: None

Contact hours: 3

Frequency of offering: Every year

Projected enrollment: 1 section of 25 students

Clearance: None

Rationale: The new general education framework includes the opportunity for experimental courses to be offered. This requires the creation of the STGE rubric, under which are to be grouped courses for each category, though faculty are encouraged to give these courses an interdisciplinary focus. Every general education course must substantially engage at least one of the goals and at least one of the skills listed in the framework adopted by Faculty Council on May 5, 2015. Each STGE course must be approved by the General Education Curriculum Committee.

Date of committee approval: October 17, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Faculty Council Committee on General Education

STGE 1070 Special Topics in General Education – International Cultural Competency

3 hours; 3 credits

Combines analytical and experiential approaches to lead students to a greater appreciation for, and understanding of, linguistic and cultural differences. Provides tools for analyzing and navigating language differences, behavioral norms, and social values that are marked by the borders between countries or language communities within countries. Also implies an awareness of regional differences, the role of media and other institutions in reifying 'national' traits, and the challenge to existing identities posed by immigration. A markedly concrete focus, intended to help students foster proficiency in their interactions with individuals from other cultures, whether these are mediated by communication technologies or face-to-face.

Prerequisite: None

Contact hours: 3

Frequency of offering: Every year

Projected enrollment: 1 section of 25 students

Clearance: None

Rationale: The new general education framework includes the opportunity for experimental courses to be offered for gen ed credit. This requires the creation of the STGE rubric, under which are to be grouped courses for each category, though faculty are encouraged to give these courses an interdisciplinary focus. Every general education course must substantially engage at least one of the goals and at least one of the skills listed in the framework adopted by Faculty Council on May 5, 2015. Each STGE course must be approved by the General Education Curriculum Committee.

Date of committee approval: October 17, 2016

Effective date: Fall 2017

SECTION A-IV: NEW COURSES
Department of Sociology

SOC 3305 Sociology of Housing

3 hours; 3 credits

Housing remains among the United States' most enduring social problems. This course provides an introduction to major housing problems in the U.S. and the social contexts and debates that surround them. Integrating sociological and related theory and methods, the course considers: major issues the U.S. faces in housing its population; the social, political, and economic contexts that contribute to them; the major social debates that frame them; and possible policy solutions.

Prerequisite: Sociology 1101

Contact hours: 3

Frequency of offering: Every other semester

Projected enrollment: 1 section of 25 students

Clearance: None

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

Date of departmental approval: October 13, 2016

Effective date: Fall 2017

SECTION A-V: CHANGES IN EXISTING COURSES
Department of Art
Change in prerequisites

FROM:

ARTD 3062 Realism, Impressionism, and Post-Impressionism
3 hours; 3 credits

Major artists and themes in European art, mainly French, during the second half of the nineteenth century. Art and literature and new optical theories of color and light. Major artists ~~include~~: Courbet, Manet, Degas, Monet, ~~Renoir,~~ Cezanne, Van Gogh, Gauguin. (Not open to students who have completed Art 16.5.)

Prerequisite: Art 1050 [1.3] or Core Studies 2.1 or Core Curriculum

TO:

ARTD 3062 Realism, Impressionism, and Post-Impressionism
3 hours; 3 credits

Major artists and themes in European art, mainly French, during the second half of the nineteenth century. Art and literature and new optical theories of color and light. Questions of politics, gender, exhibition strategies, urbanism and the landscape. Major artists: Courbet, Manet, Degas, Monet, Cassatt, Morisot, Cezanne, Seurat, Van Gogh, Gauguin. (Not open to students who have completed Art 16.5.)

Prerequisite: Art 1050 [1.3] or Core Studies 2.1 or Core Curriculum 1120 [1.2] or Art 1010

Rationale: This new description more accurately reflects the state of the literature on the subject. It now includes women artists and discussions of gender, politics, exhibition strategies, urbanism and the landscape. Prerequisites have been corrected to include courses that were inadvertently left out of the original listing.

Date of department approval: September 6, 2016

Effective date: Fall 2017

SECTION A-V: CHANGES IN EXISTING COURSES
Department of Art
Change in course description

FROM:

ARTD 3071 Modern Sculpture
3 hours; 3 credits

Art of various European and American sculptors from the late nineteenth century to the present. Major sculptors: Rodin, Brancusi, Degas, Matisse, Picasso. (Not open to students who have completed Art 15.4.)

Prerequisite: Art 1050 [1.3] or Core Studies 2.1 or Core Curriculum 1120 [1.2] or Art 1010.

TO:

ARTD 3071 Modern Sculpture
3 hours; 3 credits

Art of various European and American sculptors from the late nineteenth century to the present. Discussions of race and gender. Major sculptors: Rodin, Brancusi, Hosmer, Lewis, Degas, Matisse, Picasso. (Not open to students who have completed Art 15.4.)

Prerequisite: Art 1050 [1.3] or Core Studies 2.1 or Core Curriculum 1120 [1.2] or Art 1010.

Rationale: This new description more accurately reflects the state of the literature on the subject and the course as it is taught. It now includes women artists and discussions of race and gender.

Date of department approval: September 6, 2016

Effective date: Fall 2017

SECTION A-V: CHANGES IN EXISTING COURSES
Department of Art
Change in course title and description

FROM:

ARTD 3094 ~~Contemporary Art~~
3 hours; 3 credits

Twentieth-century art ~~since~~ World War II ~~from Abstract~~ Expressionism to the ~~present~~. ~~Contemporary art exhibited in New York City galleries and museums~~. Major movements: Pop Art, Minimalism, Conceptual Art, Post-Modernism. Major artists: Pollock, ~~de Kooning~~, ~~Johns,~~ Warhol. (Not open to students who have completed Art 15.3.)

Prerequisite: Art 1050 [1.3] or Core Studies 2.1 or Core Curriculum 1120 [1.2] or Art 1010.

TO:

ARTD 3094 Postwar Art: From World War II to 1989
3 hours; 3 credits

Twentieth-century art from World War II to the fall of the Berlin Wall. Major movements: Abstract Expressionism, Fluxus and performance, Pop Art, Minimalism, Conceptual Art, Postmodernism. Major artists: Pollock, Rauschenberg, Hesse, Serra, Richter, Warhol, Sherman. Issues of gender, race and politics.

Prerequisite: Art 1050 [1.3] or Core Studies 2.1 or Core Curriculum 1120 [1.2] or Art 1010.

Rationale: The new title and description more accurately describe the material covered in the class. It also distinguishes this course more clearly from the department's new class on global contemporary art.

Date of department approval: September 6, 2016

Effective date: Fall 2017

SECTION A-V: CHANGES IN EXISTING COURSES
Department of Biology
Change in course credits

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 1001 and Biology 1002.

TO:

BIOL 2001 Organismic Biology II, Zoology
3 hours; 3 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 credits are updated to reflect the credit load of the course as it is currently taught.

Date of department approval: March 8, 2016

Effective date: Spring 2017

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 1001 and Biology 1002

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 and Biology 3003

Rationale: The course pre-requisites are updated to include Biology 3003 since the course builds on depth and breadth from several topics taught in Microbiology and therefore, it makes sense for the students to first take the Microbiology course.

Date of department approval: September 6, 2016

Effective date: Fall 2017

SECTION A-V: CHANGES IN EXISTING COURSES
Department of Biology
Change in course credits

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 1001 and Biology 1002.

TO:

BIOL 4001 Field Studies in Botany
15 hours lecture, 60 hours fieldwork and laboratory work; 3 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 credits are updated to reflect the credit load of the course as it is currently taught.

Date of department approval: March 8, 2016

Effective date: Spring 2017

SECTION A-V: CHANGES IN EXISTING COURSES
Department of Biology
Change in course credits

FROM:

BIOL 4011 Molecular Biology of Development
~~1 hour recitation,~~ 3 hours; ~~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 4011for students who received a grade of B or higher in Chemistry 2100.

TO:

BIOL 4011 Molecular Biology of Development
3 hours; 3 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 4011for students who received a grade of B or higher in Chemistry 2100.

Rationale: The course credits are updated to reflect the credit load of the course as it is currently taught.

Date of department approval: March 8, 2016

Effective date: Spring 2017

SECTION A-V: CHANGES IN EXISTING COURSES
Department of Biology
Change in course credits

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 1001, Biology 1002 and Chemistry 1100

TO:

BIOL 4022 Biotechnology of Algae
3 hours lecture; 3 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 credits are updated to reflect the credit load of the course as it is currently taught.

Date of department approval: March 8, 2016

Effective date: Spring 2017

SECTION A-V: CHANGES IN EXISTING COURSES
Department of Biology
Change in prerequisites

FROM:

BIOL 5020 Special Topics
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. Topics vary and reflect the special interests of students and faculty. May be taken more than once for credit, but topics may not be repeated.

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

TO:

BIOL 5020 Special Topics
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. Topics vary and reflect the special interests of students and faculty. May be taken more than once for credit, but topics may not be repeated.

Prerequisite: Biology 1001 and Biology 1002 <u>and the specific pre-requisites for the special topic being offered</u>

Rationale: The course pre-requisites are updated to address the confusion caused by having a general set as well as a specific set of pre-requisites for each special topic being offered.

Date of department approval: April 12, 2016

Effective date: Fall 2017

SECTION A-V: CHANGES IN EXISTING COURSES
Department of Computer and Information Science
Change in course description, hours, credits, and prerequisites

FROM:

CISC *1170 Java for Programmers
~~3~~ hours; ~~3~~ credits

~~The facilities of Java programming language core and the key Java class libraries. The imperative (nonobject-oriented) language, support for object-oriented programming, exception handling, concurrency and network programming. Images and graphic display techniques, drawing tools, event generation and handling, containers and container hierarchies, layout techniques and applet construction. Language issues such as comparison with C and C++, compile-time vs. run-time checking, and implementation. Class design file I/O, threads, and navigating the Java class libraries. (Not open to students who are enrolled in or have completed Computer and Information Science 1.6 or 16.)~~

Prerequisite: ~~Computer and Information Science 3130 [22].~~

TO:

CISC *1170 Java for Programmers
2 hours; 2 credits

Intensive introduction to Java for students who have completed a programming course in another language. The facilities of the Java programming language core and the key Java class libraries. Imperative and procedural programming in Java. Elementary object-oriented programming. File processing, exception handling, and an introduction to graphical user interface programming. (Not open to students who are enrolled in or have completed Computer and Information Science 1115 or 3115.)

Prerequisite: An introductory programming course in a language other than Java and permission of the chairperson.

Rationale: When C++ was the introductory programming language and before the introduction of CISC 3120, this course served as the only full introduction to the Java programming language. It was taken by students who had completed the full 3-semester introductory sequence in C++. With the switch to Java and the elimination of CISC 3120, the role for this course has changed: now it serves transfer students who studied an introductory language other than Java and prepares them for CISC 3115, the second course in the sequence. It continues to be, in its essence, the same course: an introduction to Java for students who already know how to program. But now, there is no need to address the more advanced features of the Java language, because they will be covered when the student advances from this course to CISC 3115. For that reason, the number of credits has been reduced and the bulletin description updated.

Date of department approval: April 12, 2016
Effective date: Fall 2017

SECTION A-V: CHANGES IN EXISTING COURSES
Department of Computer and Information Science
Change in course description, prerequisite and course topics

FROM:

CISC 3130 Data Structures
4 hours; 4 credits

~~Stacks and their implementations. Prefix, postfix, and infix notation. Queues and linked lists and their implementations. Binary and general trees and their implementations and traversals. Sorting and searching techniques. Graph algorithms. (Not open to students who are enrolled in or have completed Computer and Information Science 14 or 21.)~~

Prerequisite: Computer and Information Science ~~3110 [15] or 16.~~

TO:

CISC 3130 Data Structures
4 hours; 4 credits

Container classes: their design, implementations, and applications. Sequences: vectors, linked lists, stacks, queues, deques, lists. Associative structures: sets, maps and their hash and tree underlying representations. Sorting and searching techniques. Collection frameworks and hierarchies.

Prerequisite: Computer and Information Science 3115; or 3110 and 1170

Rationale: The textual changes notwithstanding, the course continues to be a mainstream data structures course (CS2 in the ACM Curriculum). The reasons for the extensive changes lie in part with the variation in terminology from one language to the next as well as with an update to more contemporary language in general.

The primary rationale for this change is the move from C++ to Java as the initial (and primary) language of programming instruction in the curriculum. By the third semester (the point at which the CIS major takes this course), one has achieved a modicum of competence in the programming language, and is now prepared to study the construction of useful, efficient, and intellectually challenging structures using the elements covered in the previous two semesters. Thus, from a completely pragmatic point of view, the move from C++ to Java in this course is a direct consequence of the same move in the earlier courses.

Date of department approval: April 12, 2016

Effective date: Fall 2017

SECTION A-V: CHANGES IN EXISTING COURSES
Department of Computer and Information Science
Change in course name, description, prerequisite and course topics

FROM:

CISC 3140 Design and Implementation of ~~Software~~ Applications ~~2~~
3 hours; 3 credits

~~Continuation of Computer and Information Science 3120. Essential topics in standards-based client-server application development; database creation and programming; source management and software deployment tools. Scripting. Emphasis on the software development process and practical experience in team software development. Introduction to intelligent systems. Specification, design, implementation and testing of a web-based, data-backed interactive application, such as an educational game or an e-commerce site. This course should be taken in the semester after Computer and Information Science 3120.~~

Prerequisite: ~~CISC 3120 [20.1] and 3130 [22].~~

TO:

CISC 3140 Design and Implementation of <u>Large-Scale Web</u> Applications
3 hours; 3 credits

<u>Overview of full-stack implementation of large scale web applications. Team-based software development methodologies, tools and practice. Introduction to modern HTML, CSS. Separation of structure, style and behavior. Javascript, dynamic types, functional programming, prototypal classes, and closures. HTTP client-server communication, synchronous and asynchronous communication. Java server pages, simple database creation, programmatic queries and updates.</u>

Prerequisite: <u>Computer and Information Science 3130; and either 3115 or 3120</u>

Rationale: The purpose of this course was and will continue to be a course designed to acquaint students with team-based approaches to large-scale development. The changes here simply reflect the platform by which this is being done. Our move from C++ to Java requires some changes in the description, although the course remains the same. The original description of 3140 (20.2 at the time) was highly generic and non-specific. In practice, there have been multiple realizations of the course, all aiming to acquaint students with team-based approaches to large-scale development. The changes involving Java in the first three courses of the major's sequence are such that a web-based application context will best serve the student, by taking advantage of and reinforcing prior introduced technology and extending to the increasingly important web application world, which is an ideal locus for large-scale and team-based development. Thus, this remains the same course, but with fewer variations in its details. For that reason, there is a revision of description and bibliography to bring the written curriculum up to date with the current practice.

Date of department approval: April 12, 2016
Effective date: Fall 2017

SECTION A-VI: OTHER CHANGES
Department of Chemistry

Change in Biochemistry minor

Minor in Biochemistry

Department Requirements (32.5 - 37 credits)

Chemistry 1100 or both 1050 and 2050;
Chemistry 2100;
Chemistry 3410 or 3415W or Biology 1002;
Chemistry 3510 or both 3511 and 3512, 3520 or both 3521 and 3522~~, 4570~~;
Chemistry 4570 or both 4571 and 4572;
Chemistry 4580 or 4581

Rationale: The Department of Chemistry recently split the lecture/laboratory course Chem 4570 into separate lecture and laboratory courses, Chem 4571 and 4572, respectively. Since the two courses taken together cover material that is identical to that covered in Chem 4570, this change represents simple bookkeeping and does not reflect a change in Learning Objectives for the minor.

Date of departmental approval: October 13, 2016

Effective Date: Fall 2017

SECTION A-VI: OTHER CHANGES
Department of Computer and Information Science

Change in Computer Science minor

Minor in Computer Science

Department Requirements

A program of 12 credits in advanced electives in Computer and Information Science, including at least one of the following: Computer and Information Science ~~3120 or~~ 3130 or 3310, each with a grade of C or higher.

Rationale: The initial course sequence in CISC is changing base language from C++ to Java and as a result, CISC 3120 is being discontinued.

Date of departmental approval: April 12, 2016

Effective Date: Fall 2017

SECTION A-VI: OTHER CHANGES
Department of Speech Communication Arts and Sciences

Reactivation of SPEC 3733 Organizational Communication
3 hours; 3 credits

The communicator and communication in organizations. Theory, relationships, and objectives.

Prerequisite: Speech *1103 [3] or 7 or 1618 [18] or permission of the chairperson.

Rationale: This course has historically been part of the offerings in the Department of Speech Communication Arts & Sciences. We want to reactivate it as it is an integral part of a forthcoming minor in Business Communication that the Department plans to offer.

Date of approval by department: May 3, 2016

Effective date: Fall 2017