MAC Playhouse
May 23, 2019
Meeting of College Council Volume 46 Number 4

There were present:

Prof. Barnhart	Prof. Hume	Prof. Repetti
Prof. Borgese	Mr. Klein	Prof. Ricciardi
Prof. Cally	Prof. Lax	V.P. Rios
Prof. Chapman	Prof. Martin	Prof. Rozenboym
Prof. A. Cohen	Prof. McDevitt	V.P. Russell
Ms. J. Cohen	Prof. McKinney	President Schrader
V.P. Peter Cohen	Prof. Mikalopas	Prof. Sokolow
Ms. Daly	Prof. Mintz	Dr. Sutton-Young
Prof. Del Principe	Prof. Miranda	Prof. Taras
Prof. Derimanova	Prof. Murphy	Prof. Thomas
Prof. Ferretti	Mr. Ng	Prof. Washburn
V.P. Fox	Ms. O'Shea	Prof. Weeks
Prof. Garcia-Osuna	Ms. Olvina	Prof. Yarmish

President Schrader called the meeting to order at 3:05 PM.

I. The minutes of the meetings of April 4, 2019 were approved by acclamation, with corrections to the name of V.P. Rios (which was misspelled).

II. Reports

A. **President's Report**

The following is my May 2019 Report to the College Council. I trust that everyone has been receiving and reading my monthly reports to the campus which provide a comprehensive overview of salient information and activities. In light of today's packed agenda, this will be a brief report focused on institutional efforts; a topic I broached in last month's Report to the Council. I would also like to take this opportunity to congratulate all newly elected delegates. I look forward to working with you to advance the college mission.

Over the past few weeks, I have met with Provost Russell, Associate Provost Warren-Cook and VP Fox to develop a plan for enhancing our institutional assessment efforts, launch our new Strategic Plan and ensure compliance with Middle States standards and accreditation requirements. Our MSCHE accreditation visit is 6 years away, but our work in ensuring we meet the standards must get underway. To this end, and in accordance with Standard 7 which underlines the need for periodic assessment of the effectiveness of governance, leadership, and administration, the Council committees have submitted brief written reports on 2018-19 goals, activities and outcomes as well as a brief list of anticipated goals/objectives for 2019-20. Council committees are not alone, Senior Staff will also be expected to submit Annual Reports and Plans.

The college's engagement in assessment is important and necessary for us to maintain MSCHE accreditation. To ensure we have a vibrant culture of assessment, we will be doing a search for a Director of Assessment who will be responsible for leading academic assessment efforts, working with faculty and staff and supporting overall assessment efforts at the college. We also plan to provide resources (reassigned time) to academic departments to help support faculty participation in academic assessment efforts.

Middle States also requires us to assess other aspects of the College. Therefore, academic, educational, and student support areas such as the Library, Academic Scheduling, Registrar, Bursar, and Financial Aid have begun a multi-year process of conducting assessment projects this year. This effort will be expanded over time to include many more offices and functions.

Our strategic planning process, led by VP Fox will commence in the fall. To ensure broad college-wide participation, I am expanding the committee to include additional faculty and staff. As per the College Council Constitution, committees can include non- council members. VP Fox has already received additional recommendations from Department Chairpersons. I will be sending out formal letters of invitation to the newly recommended members of the Strategic Planning Committee.

It is important that we have robust participation in the process. To ensure this, this coming fall we are designating Tuesdays between 3:00pm and 4:40pm for Strategic Planning Committee meetings. (As you know, the work to reinstate an administrative/club in the class schedule is underway). I hope that Committee members will be available at this time and if not, will be able to adjust their schedules accordingly. Please follow up with VP Fox if you have any questions or concerns.

I am pleased to see the spirited discussion about the final exam schedule. We value your input; and even though we may not all agree on what it should be, we can agree that the schedule and the process needs to be improved. Just like the many ideas and opinions about what the final exam schedule must look like; there will be many options as to how it can improved. There is no one way. As you know, I do not believe email is the place to have productive discussion especially about matters of such import. As such, the Provost will convene a meeting on June 4, at 11:00- 12:30 in V-219 to discuss and provide input on the final exam schedule.

Finally, in the fall after my first college council meetings, I inquired about implementing the use of clickers to facilitate voting. I am happy to report that we have the clickers and will implement them next semester.

B. **Provost's Report**

> 1. The Provost formally presented to the Council the Revised Guidelines for Tenure and Promotion [ATTACHMENT A to Agenda], approved by the College P&B Committee in November 2018. This document began in front a special College Committee in 2017, and subsequent drafts were posted widely on the Academic Affairs blog, emailed to campus constituencies, and send to departmental P&B Committees for discussion and feedback. Revisions were made based on all of this input.

2. The Provost also reported on the creation of a new Academic Department of Allied Health, Mental Health and Human Services. This new department combines several programs formally affiliated with the existing departments of Behavioral Sciences, Biology, and Nursing. The creation of the new department will provide easier and more streamlined advisement to students, and will create synergy to help create new programs. It also models the national trend toward the integration of health services. It is expected to come before the CUNY Board of Trustees on June 25, 2019 for formal approval. The department will hold a one-year interim election before holding its first full-term three-year election in May 2020.

There was some discussion on the floor about the Revised Guidelines for Tenure and Promotion, including the status of textbooks as academic publications, and the identification of a possible CUNY Contract inaccuracy in terms of the reclassification of Instructors who are awarded Ph.D. degrees within five years.

The Provost noted these comments and would be pleased to begin a new re-review of this document in upcoming semesters, with a plan to go through the approval process for any recommended changes.

C. **Students Committee Report**

Outgoing Student Government Association President Anthony Ng reported on the progress and activities of the SGA since the Council approved its new Constitution in Spring 2018:

It has been almost a year since the SGA implemented a new constitution. I am here today to give you an update on our progress.

This year has been an interesting learning experience for everyone within student government, to the new students that just want to be involved to those that were in my shoes (in elected positions) to experience both the Councils and the consolidated structure. After this year, I believe that everyone leaves a bit better than when they came in. I was a part of the former student government structure that consisted of the 4 councils representing their own constituents and I too was there when College Council decided to approve this new structure. I would like to express all that I have learned so far as the head of the organization.

When elections concluded and we knew what roles we would play in the subsequent year we charged headfirst into the summer retreat where we experienced team building exercises, leadership training, and even some fine dining etiquette. On the retreat, I immediately saw changes in the room when we first convened. In prior years, the councils would operate in tandem to advocate for student needs that served all students while also focusing on their own constituents. But as the year went by it grew hard for the leadership to steer their individual councils toward those centralized goals and would default back to their own agendas.

With the new consolidated Student Government, I have seen that it is easier to steer and keep the focus on projects that won't get lost in time or translation and to keep everyone focused on the major issues facing out students. The free flow of information

meant that senators and cabinet members would know what our initiatives would be and how best to assist in pushing plans through. In addition, the relationships that we have built both within the school and with other organizations within CUNY shine brighter because of the combined effort of our student leaders stepping up for our rights as students, faculty, and members of the CUNY family.

The unity of different majors with different backgrounds has opened different channels of thinking that challenge the status quo. But nothing can be perfect, and with any pilot structure there are challenges to face. We the students had to pave our own road, something many including myself are inexperienced of doing, yet we persevered, with the help of student life, and the many supportive people we have met while serving, we changed the perception of those that may look at us as less. I have learned that my leadership and soft skills could be improved and that you can't be passive about certain issues, that public speaking is a crucial skill and can't be substituted with a text/email.

The SGA has learned so much over the past year. It pushed me harder than any Calculus Course and made me realize that growth and change like a diamond comes under extreme pressure. The road has been rough for the first year for Student Government, we as students are used to learning from textbooks, having reference, we do not have that cushion. I have seen what we can do in a year and I know that each year moving forward we can only grow and expand in our presence in the school and our presence to the students.

D. **Curriculum Committee Report**

The following resolutions [on pages 4-30] were approved unanimously. They are followed by Informational Items on p.30-45, and the Agenda resumes there. (The section numbering reflects those used by CUNY):

CHANGE IN DEGREE REQUIREMENT

Department of Biology

1. A.S. Biology
HEGIS: 5604.00
PROGRAM CODE: 01039

FROM: **TO:**

CUNY CORE	CREDITS	CUNY CORE	CREDITS
REQUIRED CORE: (4 Courses, 13 Credits)	13	**REQUIRED CORE:** (4 Courses, 13 Credits)	13
When Required Core Courses are specified for a category, they are required for the major		When Required Core Courses are specified for a category, they are required for the major	
ENG 1200 - English Composition I	3	ENG 1200 - English Composition I	3
ENG 2400 - English Composition II	3	ENG 2400 - English Composition II	3
Mathematical & Quantitative Reasoning*:	3	Mathematical & Quantitative Reasoning*^:	3

<table>
<tr><td>

MAT 900 - College Algebra

Life and Physical Sciences*:
    BIO 1300 – General Biology I

FLEXIBLE CORE: (6 Courses, ~~20~~ **19** Credits)

When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.

A. World Cultures and Global Issues
B. U.S. Experience In Its Diversity
C. Creative Expression
D. Individual & Society
E. Scientific World*:
 BIO 1400 – General Biology II

MAT 1400 - Analytic Geometry and Pre-Calculus Math

DEPARTMENT REQUIREMENTS (3 Courses, 11 to 12 Credits)

CHM 1100 – General Chemistry I
CHM 1200 - General Chemistry II
CP 1100 - Introduction to Computers and Computer Applications (4 cars) or
    BIO/CIS 6000 – Computer Applications in Bioinformatics (3 cars.)

CONCENTRATIONS: (2 Courses, 8 Credits)
Select **one (1)** of the following concentrations:

Biology Transfer: (2 Courses, 8 Credits)

Select **two (2)** of the following Biology Laboratory courses:

BIO 2100 - Comparative Anatomy (4 cars.) or
BIO 2200 - Developmental Biology (4 cars.) or
BIO 5000 - General Microbiology (4 cars.) or
BIO 5200 - Marine Biology (4 cars.) or
BIO 5300 - Ecology (4 cars.) or

BIO 5800 - Recombination DNA Technology (4 cars.) or

BIO 5900 – Genetics (4 cars.) or

BIO 6500 - Molecular and Cellular Biology (4 cars.)

</td><td>

4

~~20~~ **19**

~~04~~ **3**

11-12

4
4

4 - 3

8

</td><td>

MAT 900 - College Algebra **or**
MAT 9A0 - Algebra for STEM Majors

Life and Physical Sciences*:
    BIO 1300 – General Biology I

FLEXIBLE CORE: (6 Courses,**19** Credits)

When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.

A. World Cultures and Global Issues
B. U.S. Experience In Its Diversity
C. Creative Expression
D. Individual & Society
E. Scientific World*:
 BIO 1400 – General Biology II

 MAT 1400 - Analytic Geometry and Pre-Calculus Math

DEPARTMENT REQUIREMENTS (3 Courses, 11 to 12 Credits)

CHM 1100 – General Chemistry I
CHM 1200 - General Chemistry II
CP 1100 - Introduction to Computers and Computer Applications (4 cars) or
    BIO/CIS 6000 – Computer Applications in Bioinformatics (3 cars.)

CONCENTRATIONS: (2 Courses, 8 Credits)
Select **one (1)** of the following concentrations:

Biology Transfer: (2 Courses, 8 Credits)

Select **two (2)** of the following Biology Laboratory courses:
BIO 2100 - Comparative Anatomy (4 cars.) or
BIO 2200 - Developmental Biology (4 cars.) or
BIO 5000 - General Microbiology (4 cars.) or
BIO 5200 - Marine Biology (4 cars.) or
BIO 5300 - Ecology (4 cars.) or
BIO 5800 - Recombination DNA Technology (4 cars.) or
BIO 5900 – Genetics (4 cars.) or
BIO 6500 - Molecular and Cellular Biology (4 cars.)

</td><td>

4

19

3

11-12

4
4

4 - 3

8

</td></tr>
</table>

OR

Allied Health Transfer (2 Courses, 8 Credits):

BIO 1100 - Human Anatomy and Physiology I (4 cars.)

BIO 1200 - Human Anatomy and Physiology II (4 cars.)

ELECTIVES: ~~7   8~~ **8 - 9** credits sufficient to meet the required total 60 credits for the degree.

Allied Health Transfer Option, Suggested Elective:

BIO/MAT 9100 – Biostatistics (4 cars.)

Transfer to a Physician Assistant Program, Suggested Elective:

BIO 5100 – Microbiology in Health and Disease (4 cars.)

TOTAL CREDITS: 60

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

	~~7 8~~ **8 - 9**
	60

OR

Allied Health Transfer (2 Courses, 8 Credits):
BIO 1100 - Human Anatomy and Physiology I (4 cars.)
BIO 1200 - Human Anatomy and Physiology II (4 cars.)

ELECTIVES: 8 - 9 credits sufficient to meet the required total 60 credits for the degree.

Allied Health Transfer Option, Suggested Elective:
BIO/MAT 9100 – Biostatistics (4 cars.)

Transfer to a Physician Assistant Program, Suggested Elective:
BIO 5100 – Microbiology in Health and Disease (4 cars.)

TOTAL CREDITS: 60
*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.
^ Depending on Math placement, students may be required to complete MAT 900 or MAT 9A0

	8 -9
	60

Department of Business
1. A.S. Accounting
HEGIS CODE: 5002.00
PROGRAM CODE: 01045

FROM:

TO:

CUNY CORE	CREDITS	CUNY CORE	CREDITS
REQUIRED CORE: (4 Courses, 12 Credits)	12	REQUIRED CORE: (4 Courses, 12 Credits)	12
When Required Core courses are specified for a category, they are strongly suggested and/or required for the major.		When Required Core courses are specified for a category, they are strongly suggested and/or required for the major.	
ENG 1200	3	ENG 1200	3
ENG 2400	3	ENG 2400	3
Mathematical and Quantitative Reasoning MAT 2200 - Business Statistics**	3	Mathematical and Quantitative Reasoning MAT 2200 - Business Statistics**	3
Life and Physical Sciences*	4	Life and Physical Sciences*	4

FLEXIBLE CORE (6 Courses, 18 Credits)	18

When Flexible Core courses are specified for a category, they are strongly suggested and/or required for the major. One (1) course from each Group A to E and one (1) additional course from any group

A. World Cultures and Global Issues
B. U.S. Experience In Its Diversity
C. Creative Expression
D. Individual & Society
       ECO 1200- Macroeconomics
       ECO 1300- Microeconomics
E. Scientific World

DEPARTMENT REQUIREMENTS (9 to 11 Courses, 29 to 36 Credits)	29-36
ACC 1100 - Fundamentals of Accounting I	4
ACC 1200 - Fundamentals of Accounting II	4
ACC 2100 - Intermediate Accounting I	3
ACC 2200 - Intermediate Accounting II	3
BA 1100 - Fundamentals of Business	3
BA 1200 - Business Law I	3
BA 6000 - Introduction to Computer Concepts	3
ECO 1200 - Macroeconomics	3
ECO 1300 - Microeconomics	3

AND

IF ECO 1200 or ECO 1300 is taken to satisfy Pathways Flexible Core, THEN choose one (1) of the following courses. IF BOTH ECO 1200 and ECO 1300 are taken to satisfy Pathways Flexible Core, then choose two (2) of the following courses:

BA 1300 – Business Law II **or**	3
BA 6100 – Spreadsheet Applications in Business **or**	3
ECO 1400 – Money and Banking **or**	3
ACC 3100 – Cost Accounting** **or**	4
ACC 6000 – Microcomputer Accounting Applications	3

ELECTIVES:	1
1 credit sufficient to meet required total of 60	

TOTAL CREDITS: 60	60

FLEXIBLE CORE (6 Courses, 18 Credits)	18

When Flexible Core courses are specified for a category, they are strongly suggested and/or required for the major. One (1) course from each Group A to E and one (1) additional course from any group
A. World Cultures and Global Issues
B. U.S. Experience In Its Diversity
C. Creative Expression
D. Individual & Society
       ECO 1200- Macroeconomics *
       ECO 1300- Microeconomics *
E. Scientific World

DEPARTMENT REQUIREMENTS (9 to 11 Courses, 29 to 36 Credits)	29-36
ACC 1100 - Fundamentals of Accounting I	4
ACC 1200 - Fundamentals of Accounting II	4
ACC 2100 - Intermediate Accounting I	3
ACC 2200 - Intermediate Accounting II	3
BA 1100 - Fundamentals of Business	3
BA 1200 - Business Law I	3
BA 6000 - Introduction to Computer Concepts	3
ECO 1200 - Macroeconomics	3
ECO 1300 - Microeconomics	3

AND

IF ECO 1200 or ECO 1300 is taken to satisfy Pathways Flexible Core, THEN choose one (1) of the following courses. IF BOTH ECO 1200 and ECO 1300 are taken to satisfy Pathways Flexible Core, then choose two (2) of the following courses:

BA 1300 – Business Law II **or**	3
BA 6100 – Spreadsheet Applications in Business **or**	3
ECO 1400 – Money and Banking **or**	3
ACC 3100 – Cost Accounting** **or**	4
ACC 6000 – Microcomputer Accounting Applications	3

ELECTIVES:	1
1 credit sufficient to meet required total of 60	

TOTAL CREDITS: 60	60

NOTE: **This is a 4-credit course. For Financial Aid, TAP will count 3 credits towards your degree requirements. Additional credit(s) will go towards electives, if available. Consultation with a program advisor to address financial aid and academic planning is **highly recommended.**

*It is HIGHLY RECOMMENDED that students take both ECO 1200 and ECO 1300 to satisfy the Pathways Flexible Core courses. However, if neither course is used within the Pathways Flexible Core, both must be taken within the major and no optional courses will be required.

2. A.S. Business Administration
HEGIS CODE: 5002.00
PROGRAM CODE: 01050

FROM:

TO:

CUNY CORE	CREDITS	CUNY CORE	CREDITS
REQUIRED CORE: (4 Courses, 12 Credits)	12	REQUIRED CORE: (4 Courses, 12 Credits)	12
When Required Core courses are specified for a category, they are strongly suggested and/or required for the major.		When Required Core courses are specified for a category, they are strongly suggested and/or required for the major.	
ENG 1200	3	ENG 1200	3
ENG 2400	3	ENG 2400	3

Mathematical and Quantitative Reasoning
        MAT 2200 - Business Statistics**
	3	Mathematical and Quantitative Reasoning
		        MAT 2200 - Business Statistics**
			3

Life and Physical Sciences*	4	Life and Physical Sciences*	4
FLEXIBLE CORE (6 Courses, 18 Credits)	18	FLEXIBLE CORE (6 Courses, 18 Credits)	18
When Flexible Core courses are specified for a category, they are strongly suggested and/or required for the major. One (1) course from each Group A to E and one (1) additional course from any group		When Flexible Core courses are specified for a category, they are strongly suggested and/or required for the major. One (1) course from each Group A to E and one (1) additional course from any group	
A. World Cultures and Global Issues		A. World Cultures and Global Issues	
		It is recommended that students planning to transfer to Brooklyn College's BBA program take PHI 6800	
B. U.S. Experience In Its Diversity		B. U.S. Experience In Its Diversity	
C. Creative Expression		C. Creative Expression	
D. Individual & Society		D. Individual & Society	
ECO 1200- Macroeconomics		ECO 1200- Macroeconomics *	
ECO 1300- Microeconomics		ECO 1300- Microeconomics *	

E. Scientific World

DEPARTMENT REQUIREMENTS (9 to 11 Courses, 29 to 35 Credits)	29-35
ACC 1100 - Fundamentals of Accounting I	4
ACC 1200 - Fundamentals of Accounting II	4
BA 1100 - Fundamentals of Business	3
BA 1200 - Business Law I	3
BA 1400 - Principles of Marketing	3
BA 3100 - Organizational Behavior and Management	3
BA 6000 - Introduction to Computer Concepts	3
ECO 1200 - Macroeconomics	3
ECO 1300 - Microeconomics	3

AND

IF ECO 1200 or ECO 1300 is taken to satisfy Pathways Flexible Core, THEN choose one (1) of the following courses. IF BOTH ECO 1200 and ECO 1300 are taken to satisfy Pathways Flexible Core, then choose two (2) of the following courses:

BA 1300 – Business Law II **or**	3
BA 6100 – Spreadsheet Applications in Business **or**	3
ECO 1400 – Money and Banking ~~or~~	3
~~TAH 500 - Labor Relations and Customer Service Practices^~~	~~3~~

ELECTIVES: 1 credit sufficient to meet required total of 60	1

TOTAL CREDITS: 60	60

NOTE:

~~^Students interested in pursuing careers in Customer Service should take this course.~~

 **This is a 4-credit course. For Financial Aid, TAP will count 3 credits towards your degree requirements. Additional credit(s) will go towards electives, if available. Consultation with a program advisor to address financial aid and academic planning is highly recommended.

Department of Mathematics and Computer Science

1. A.A.S. Computer Information Systems
HEGIS CODE: 5101.00
PROGRAM CODE: 01055

FROM: **TO:**

CUNY CORE	CREDITS	CUNY CORE	CREDITS
REQUIRED CORE: (4 Courses, ~~13~~ 12-13 Credits)	~~13~~ 12-13	**REQUIRED CORE: (4 Courses, 12-13 Credits)**	**12-13**
When Required Core courses are specified for a category, they are strongly suggested and/or required for the major.		When Required Core courses are specified for a category, they are strongly suggested and/or required for the major.	
ENG 1200 - English Composition I	3	ENG 1200 - English Composition I	3
ENG 2400 - English Composition II	3	ENG 2400 - English Composition II	3
Mathematical and Quantitative Reasoning:	**3 - 4**	Mathematical and Quantitative Reasoning:	**3 - 4**
MAT 1400 – Analytic Geometry and Pre-Calculus* or	~~04~~ 3	MAT 1400 – Analytic Geometry and Pre-Calculus* or	**3**
MAT/BA 2200 – Business Statistics*	4	MAT/BA 2200 – Business Statistics*	4
Life and Physical Sciences	3	Life and Physical Sciences	3
FLEXIBLE CORE: (3 Courses, 9 Credits)	9	**FLEXIBLE CORE: (3 Courses, 9 Credits)**	9
When Flexible Core Courses are specified for a category, they are strongly suggested and/or required for the major.		When Flexible Core Courses are specified for a category, they are strongly suggested and/or required for the major.	
Select one (1) course from three (3) Groups A to E for a total of nine (9) credits. Each Course Must be in a <u>Different</u> Discipline		Select one (1) course from three (3) Groups A to E for a total of nine (9) credits. Each Course Must be in a <u>Different</u> Discipline	
A. World Cultures & Global Issues		A. World Cultures & Global Issues	
B. U.S. Experience In Its Diversity		B. U.S. Experience In Its Diversity	
C. Creative Expression		C. Creative Expression	
D. Individual & Society		D. Individual & Society	

E. Scientific World*:

E. Scientific World*:

MAT 900 - College Algebra or ^   **3**

MAT 9A0 - Algebra for STEM Majors   **3**

^

DEGREE REQUIREMENTS: (11 Courses, 37 to ~~39~~ **38 Credits)**   37- ~~39~~ **38**

CP 500 - Introduction to Computer Programming	4
CP 2100 - C++ Programming I	4
CP 2200 - C++ Programming II	4
CIS 1200 - Introduction to Operating Systems	3
CIS 1500 - Applied Computer Architecture	3
CIS 3100 - Introduction to Database	3
ACC 1100 – Fundamentals of Accounting I **or**	3 - 4
BA 1100 - Fundamentals of Business **or**	
BA 1200 - Business Law I	
HE 1400 - Critical Issues in Personal Health	1

AND

Select three (3) courses from the following   ~~12 13~~ **12**

CP 6200 - JAVA Programming 2	4
~~CP 7100 - Programming In UNIX/LINUX~~	~~5~~
CIS 2100 - Introduction to Webpage Development	4
CIS 2200 - HTML Authoring and JavaScript	4
CIS 3200 - Advanced Database Programming	4
CIS 4500 - Network Server Administration	4

ELECTIVES: ~~0 1~~ **0 -2** credits sufficient to total 60 credits for the degree.   ~~0 1~~ **0 -2**

TOTAL CREDITS: 60   60

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

DEGREE REQUIREMENTS: (11 Courses, 37 to 38 Credits)   37 - 38

CP 500 - Introduction to Computer Programming	4
CP 2100 - C++ Programming I	4
CP 2200 - C++ Programming II	4
CIS 1200 - Introduction to Operating Systems	3
CIS 1500 - Applied Computer Architecture	3
CIS 3100 - Introduction to Database	3
ACC 1100 – Fundamentals of Accounting I **or**	3 - 4
BA 1100 - Fundamentals of Business **or**	
BA 1200 - Business Law I	
HE 1400 - Critical Issues in Personal Health	1

AND

Select three (3) courses from the following   **12**

CP 6200 - JAVA Programming 2	4
-	-
CIS 2100 - Introduction to Webpage Development	4
CIS 2200 - HTML Authoring and JavaScript	4
CIS 3200 - Advanced Database Programming	4
CIS 4500 - Network Server Administration	4

ELECTIVES: **0 -2** credits sufficient to total 60 credits for the degree.   **0-2**

TOTAL CREDITS: 60   60

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

^ Depending on Math placement, students may be required to complete MAT 900, or MAT 9A0, and MAT 1400.

2. A.S. Computer Science
HEGIS CODE: 5103.00
PROGRAM CODE: 01041

FROM: **TO:**

CUNY CORE	CREDITS	CUNY CORE	CREDITS
REQUIRED CORE: (4 Courses, ~~13~~ 12 Credits)	~~13~~ **12**	**REQUIRED CORE: (4 Courses, 12 Credits)**	**12**
When Required Core Courses are specified for a category, they are required for the major		When Required Core Courses are specified for a category, they are required for the major	
ENG 1200 - English Composition I	3	ENG 1200 - English Composition I	3
ENG 2400 - English Composition II	3	ENG 2400 - English Composition II	3
Mathematical and Quantitative Reasoning*:	~~04~~ **3**	Mathematical and Quantitative Reasoning*^:	**3**
		MAT 900 - College Algebra^ or	
		MAT 9A0 - Algebra for STEM Majors^ or	
		MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics^ or	
MAT 1500 – Calculus I	~~04~~ **3**	MAT 1500 – Calculus I	**3**
Life and Physical Sciences	3	Life and Physical Sciences	3
FLEXIBLE CORE:	~~20~~ **18**	**FLEXIBLE CORE:**	**18**
When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.		When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.	
A. World Cultures and Global Issues		A. World Cultures and Global Issues	
B. U.S. Experience In Its Diversity		B. U.S. Experience In Its Diversity	
C. Creative Expression		C. Creative Expression	
D. Individual & Society		D. Individual & Society	
E. Scientific World*^:		E. Scientific World*^:	
		MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics^ or	**3**
		MAT 1500 - Calculus I or	**3**
MAT 1600 - Calculus II	~~04~~ **3**	**MAT 1600 - Calculus II**	**3**
AND		**AND**	
CS 1200 - Introduction to Computing	~~04~~ **3**	**CS 1200 - Introduction to Computing**	**3**

Major Requirements (7 - 9 Courses, 2̶7̶ 24 - 30 Credits)

CS 13A0 - Advanced Programming Techniques	4
CS 1400 - Computer Organization and Assembly Language Programming	4
CS 3500 - Discrete Structures	0̶4̶ **3**
CS 3700 - Data Structures	0̶4̶ **3**
MAT 2100 - Calculus III	0̶4̶
MAT 5600 - Linear Algebra	3
MAT 9100/BIO 9100 - Biostatistics **or**	4
MAT 2200/BA 2200 - Business Statistics	

ELECTIVES: 0 **- 6** credits sufficient to total 60 credits for the degree.   0 **-6**

TOTAL CREDITS: 60   60

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

Major Requirements (7 - 9 Courses, 24 - 30 Credits)

CS 13A0 - Advanced Programming Techniques	4
CS 1400 - Computer Organization and Assembly Language Programming	4
CS 3500 - Discrete Structures	**3**
CS 3700 - Data Structures	**3**
-	
MAT 5600 - Linear Algebra	3
MAT 9100/BIO 9100 - Biostatistics **or**	4
MAT 2200/BA 2200 - Business Statistics	

If not taken for Required Core or Flexible Core:

MAT 1500 - Calculus I	0̶4̶ **3**
MAT 1600 - Calculus II	0̶4̶ **3**

Select ONLY ONE (1) of the two options below based on initial Mathematics Placement:**   **3**

OPTION 1:

If student's initial Mathematics Placement is below MAT 1500:

MAT 1000 - College Trigonometry^

OPTION 2:

If student's initial Mathematics Placement is MAT 1500:

      MAT 2100 - Calculus III

ELECTIVES: 0 **- 6** credits sufficient to total 60 credits for the degree.   0 **-6**

TOTAL CREDITS: 60   60

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

^ Depending on Math placement, students may be required to complete MAT 900, or MAT 9A0, and/or MAT 1400, and/or MAT 1000.

**Consultation with the Mathematics Department is HIGHLY recommended to ensure that the student selects the correct option.

3. A.S. Mathematics

HEGIS CODE: 5617.00

PROGRAM CODE: 01041

FROM: **TO:**

CUNY CORE	CREDITS	CUNY CORE	CREDITS
REQUIRED CORE: (4 Courses, ~~13~~ 12 Credits)	~~13~~ **12**	**REQUIRED CORE: (4 Courses, 12 Credits)**	12
When Required Core Courses are specified for a category, they are required for the major		When Required Core Courses are specified for a category, they are required for the major	
ENG 1200 - English Composition I	3	ENG 1200 - English Composition I	3
ENG 2400 - English Composition II	3	ENG 2400 - English Composition II	3
Mathematical and Quantitative Reasoning*^:	~~04~~ **3**	Mathematical and Quantitative Reasoning*^:	**3**
		MAT 900 - College Algebra^ or MAT 9A0 - Algebra for STEM Majors^ or MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics^ or	
MAT 1500 - Calculus I	~~04~~ **3**	MAT 1500 - Calculus I	**3**
Life and Physical Sciences	3	Life and Physical Sciences	3
FLEXIBLE CORE:	~~20~~ **18**	**FLEXIBLE CORE:**	**18**
When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.		When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.	
A. World Cultures and Global Issues		A. World Cultures and Global Issues	
B. U.S. Experience In Its Diversity		B. U.S. Experience In Its Diversity	
C. Creative Expression		C. Creative Expression	
D. Individual & Society		D. Individual & Society	
E. Scientific World*^:		E. Scientific World*^:	

			MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics^ or		**3**
			MAT 1500 - Calculus I or		**3**
MAT 1600 - Calculus II	~~04~~ **3**		**MAT 1600 - Calculus II**		**3**
AND			**AND**		
CS 1200 - Introduction to Computing	~~04~~ **3**		CS 1200 - Introduction to Computing		**3**

	~~27~~ **24-30**			**24-30**
Major Requirements: (8-10 Courses, ~~27~~ 24 - 30 Credits)			**Major Requirements:** (8-10 Courses, 24 - 30 Credits)	
MAT 2100 - Calculus III	~~04~~ **3**		MAT 2100 - Calculus III	**3**
MAT 5500 - Differential Equations	3		MAT 5500 - Differential Equations	3
MAT 5600 - Linear Algebra	3		MAT 5600 - Linear Algebra	3
MAT 9100/BIO 9100 - Biostatistics **or**	4		MAT 9100/BIO 9100 - Biostatistics **or**	4
MAT 2200/BA 2200 - Business Statistics			MAT 2200/BA 2200 - Business Statistics	
CS 3500 - Discrete Structures	~~04~~ **3**		CS 3500 - Discrete Structures	**3**
~~HE 1400 - Critical Issues in Personal Health~~	~~1~~			-
			MAT 3000 Introduction to Mathematical Concepts in Proof	**1**
			If not taken for Required Core or Flexible Core:	
			MAT 1500 - Calculus I	~~04~~ **3**
			MAT 1600 - Calculus II	~~04~~ **3**
~~Select **two (2)** courses from the following:~~	-	-		-
~~CS 13A0 - Advanced Programming Techniques~~				
~~CS 1400 - Computer Organization and Assembly Language Programming~~				
~~MAT 1100 - Finite Mathematics~~				
~~MAT 3200 - Introduction to Set Theory~~				
~~MAT 7100 - Applications of Linear Algebra~~				
			Select <u>ONLY ONE</u> (1) of the two options below based on initial Mathematics Placement: **	**7-8**
			OPTION 1:	
			If student's initial Mathematics Placement is below MAT 1500:	
			MAT 1000 - College Trigonometry^	

15

OPTION 2:

If student's initial Mathematics Placement is MAT 1500:

   Select **two (2)** courses from the following:
   CS 13A0 - Advanced Programming Techniques

   MAT 1100 - Finite Mathematics

   MAT 3200 - Introduction to Set Theory

ELECTIVES: 0 **- 6** credits sufficient to total 60 credits for the degree.	0 **- 6**	**ELECTIVES:** 0 **- 6** credits sufficient to total 60 credits for the degree.	**0-6**
TOTAL CREDITS: 60	60	**TOTAL CREDITS: 60**	60

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

^ Depending on Math placement, students may be required to complete MAT 900, or MAT 9A0, and/or MAT 1400 and MAT 1000.

**Consultation with the Mathematics Department is HIGHLY recommended to ensure that the student selects the correct option.

Department of Physical Sciences

1. A.S. Chemistry
HEGIS CODE: 5619.00
PROGRAM CODE: 01043

FROM:

TO:

CUNY CORE	**CREDITS**	**CUNY CORE**	**CREDITS**

REQUIRED CORE: (4 Courses, ~~14~~ **13** Credits)	~~14~~ **13**	**REQUIRED CORE:** (4 Courses, **13** Credits)	**13**

REQUIRED CORE: (4 Courses, ~~14~~ **13** Credits)   ~~14~~ **13**

When Required Core Courses are specified for a category, they are required for the major

ENG 1200 - English Composition I   3
ENG 2400 - English Composition II   3
Mathematical and Quantitative Reasoning*:   ~~04~~ **3**

     MAT 1500 – Calculus I   ~~04~~
Life and Physical Sciences*:   4
     CHM 1100 - General Chemistry I

FLEXIBLE CORE: (6 Courses, 20 Credits)   20

When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.

A. World Cultures and Global Issues

B. U.S. Experience In Its Diversity

C. Creative Expression

D. Individual & Society

E. Scientific World*:

     ~~MAT 1600 - Calculus II~~

     CHM 1200 - General Chemistry II

DEPARTMENT REQUIREMENTS (~~04~~ **7**Courses, ~~18~~ **26-27** Credits)

CHM 3100 – Organic Chemistry I   5
CHM 3200 – Organic Chemistry II   5
~~PHY 1300 - Advanced General Physics I~~   ~~04~~

REQUIRED CORE: (4 Courses, **13** Credits)   **13**

When Required Core Courses are specified for a category, they are required for the major

ENG 1200 - English Composition I   3
ENG 2400 - English Composition II   3
Mathematical and Quantitative Reasoning*:   **3**

     MAT 900 - College Algebra or
     MAT 9A0 - Algebra for STEM Majors or
     MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics or

     MAT 1500 – Calculus I   **3**
Life and Physical Sciences*:   4
     CHM 1100 - General Chemistry I

FLEXIBLE CORE: (6 Courses, 20 Credits)   20

When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.

A. World Cultures and Global Issues

B. U.S. Experience In Its Diversity

C. Creative Expression

D. Individual & Society

E. Scientific World*:

     ~~MAT 1600 - Calculus II~~
     PHY 1300 – Advanced General Physics I

     CHM 1200 - General Chemistry II

DEPARTMENT REQUIREMENTS (**7** Courses, **26-27** Credits)

Additional Physical Sciences Requirements (3 Courses, 14 Credits)

CHM 3100 – Organic Chemistry I   5
CHM 3200 – Organic Chemistry II   5
-                     -

PHY 1400 – Advanced General Physics II	4	PHY 1400 – Advanced General Physics II	4
		Additional Mathematics Requirements (2 Courses, 6 Credits)	**6**
		Select Two (2) additional courses beyond the Mathematical and Quantitative Reasoning (MQR) course from the following:	
		MAT 1000 - College Trigonometry^	
		MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics (Recommended)	
		MAT 1500 - Calculus I (Recommended)	
		MAT 1600 - Calculus II (Recommended)	
		MAT 2100 - Calculus III	
		MAT 5500 - Differential Equations	
		MAT 5600 - Linear Algebra	
		Additional Science and Mathematics Electives (2 Courses, 6 - 7 Credits)	
		Elective Credits in CHM, CS, EGR, EPS, MAT, PHY, or SCI	
<u>**ELECTIVES:**</u> ~~8~~ **0 - 1** credits sufficient to meet the required total 60 credits for the degree.	~~8~~ **0-1**	<u>**ELECTIVES:**</u> **0 - 1** credits sufficient to meet the required total 60 credits for the degree.	**0-1**
<u>**TOTAL CREDITS: 60**</u>	60	<u>**TOTAL CREDITS: 60**</u>	60

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

^ Depending on Math placement, students may be required to select MAT 1000

2. A.S. Earth and Planetary Science

HEGIS: 5499.00

PROGRAM CODE: 34242

FROM: **TO:**

<u>**CUNY CORE**</u>	**CREDITS**	<u>**CUNY CORE**</u>	**CREDITS**

<table>
<tr><td colspan="2">

REQUIRED CORE: (4 Courses, ~~14~~ **13** Credits)

</td><td>~~14~~ **13**</td><td colspan="2">

REQUIRED CORE: (4 Courses, **13** Credits)

</td><td>**13**</td></tr>
</table>

When Required Core Courses are specified for a category, they are required for the major		When Required Core Courses are specified for a category, they are required for the major	
ENG 1200 - English Composition I	3	ENG 1200 - English Composition I	3
ENG 2400 - English Composition II	3	ENG 2400 - English Composition II	3
Mathematical & Quantitative Reasoning*:	~~04~~ **3**	Mathematical & Quantitative Reasoning*:	**3**
		MAT 900 - College Algebra or MAT 9A0 - Algebra for STEM Majors or MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics or	
MAT 1500 – Calculus I	~~04~~ **3**	MAT 1500 – Calculus I	**3**
Life and Physical Sciences*: CHM 1100 - General Chemistry I	4	Life and Physical Sciences*: CHM 1100 - General Chemistry I	4

<table>
<tr><td colspan="2">

FLEXIBLE CORE: (6 Courses, 20 Credits)

</td><td>20</td><td colspan="2">

FLEXIBLE CORE: (6 Courses, 20 Credits)

</td><td>20</td></tr>
</table>

When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.	When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.
A. World Cultures and Global Issues	A. World Cultures and Global Issues
B. U.S. Experience In Its Diversity	B. U.S. Experience In Its Diversity
C. Creative Expression	C. Creative Expression
D. Individual & Society	D. Individual & Society
E. Scientific World*:	E. Scientific World*:
~~MAT 1600 - Calculus II~~	
EPS 3100 - Meteorology	EPS 3100 - Meteorology
	EPS 3800 – Introduction to Earth Science

<table>
<tr><td colspan="2">

DEPARTMENT REQUIREMENTS (~~6~~ **7** Courses, ~~24~~ **26** Credits)

</td><td>~~24~~ **26**</td><td colspan="2">

DEPARTMENT REQUIREMENTS (**7** Courses, **26** Credits)

</td><td>**26**</td></tr>
</table>

		Additional Physical Sciences Requirements (5 Courses, 20 Credits)	
EPS 3200 – Oceanography	4	EPS 3200 – Oceanography	4
EPS 3300 – Physical Geography	4	EPS 3300 – Physical Geography	4
EPS 3500 – Astronomy	4	EPS 3500 – Astronomy	4
EPS 3600 – Planetology	4	EPS 3600 – Planetology	4

~~EPS 3800 – Introduction to Earth Science~~	~~04~~	-	-
PHY 1100 – General Physics I	4	PHY 1100 – General Physics I	4
		Additional Mathematics Requirements (2 Courses, 6 Credits)	**6**
		Select Two (2) additional courses beyond the Mathematical and Quantitative Reasoning (MQR) course from the following:	
		MAT 1000 - College Trigonometry^	
		MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics (Recommended)	
		MAT 1500 - Calculus I (Recommended)	
		MAT 1600 - Calculus II (Recommended)	
		MAT 2100 - Calculus III	
		MAT 5500 - Differential Equations	
		MAT 5600 - Linear Algebra	
ELECTIVES: ~~2~~ **1** credit sufficient to meet the required total 60 credits for the degree.	~~2~~ **1**	**ELECTIVES**: **1** credit sufficient to meet the required total 60 credits for the degree.	**1**
-		-	
TOTAL CREDITS: 60	60	**TOTAL CREDITS: 60**	60

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

^ Depending on Math placement, students may be required to select MAT 1000

3. A.S. Engineering Science

HEGIS: 5609.00

PROGRAM CODE: 87212

FROM: **TO:**

CUNY CORE	**CREDITS**	**CUNY CORE**	**CREDITS**
REQUIRED CORE: (4 Courses, ~~14~~ **13** Credits)	~~14~~ **13**	**REQUIRED CORE:** (4 Courses, ~~14~~ **13** Credits)	~~14~~ **13**

When Required Core Courses are specified for a category, they are required for the major		When Required Core Courses are specified for a category, they are required for the major	
ENG 1200 - English Composition I	3	ENG 1200 - English Composition I	3
ENG 2400 - English Composition II	3	ENG 2400 - English Composition II	3
Mathematical & Quantitative Reasoning*:	~~04~~ **3**	Mathematical & Quantitative Reasoning*:	**3**
		MAT 900 - College Algebra or MAT 9A0 - Algebra for STEM Majors or MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics or	
MAT 1500 – Calculus I	~~04~~ **3**	MAT 1500 – Calculus I	**3**
Life and Physical Sciences*: CHM 1100 - General Chemistry I	4	Life and Physical Sciences*: CHM 1100 - General Chemistry I	4

FLEXIBLE CORE: (6 Courses, 20 Credits)	20	**FLEXIBLE CORE:** (6 Courses, 20 Credits)	20
When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.		When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.	
A. World Cultures and Global Issues		A. World Cultures and Global Issues	
B. U.S. Experience In Its Diversity		B. U.S. Experience In Its Diversity	
C. Creative Expression		C. Creative Expression	
D. Individual & Society		D. Individual & Society	
E. Scientific World*:		E. Scientific World*:	
~~MAT 1600 - Calculus II~~		-	
CHM 1200 - General Chemistry II		CHM 1200 - General Chemistry II	
		PHY 1300 – Advanced General Physics I	

DEPARTMENT REQUIREMENTS (9 **- 12** Courses, ~~32~~ **28 - 37** Credits)	~~32~~ **28-37**	**DEPARTMENT REQUIREMENTS** (9 **- 12** Courses, **28 - 37** Credits)	**28-37**
~~MAT 2100 – Calculus III~~	~~04~~	-	-
~~MAT 5500 – Differential Equations~~	~~3~~	-	-
~~MAT 5600 – Linear Algebra~~	~~3~~	-	-
~~CS 1200 – Introduction to Computing~~	~~04~~	-	-
~~PHY 1300 – Advanced General Physics I~~	~~04~~	-	-
~~PHY 1400 – Advanced General Physics II~~	~~04~~	-	-
~~EGR 2100 – Engineering Design~~	~~3~~	-	-
~~EGR 2200 – Introduction to Electrical Engineering~~	~~3~~	-	-
~~EGR 2300 – Introduction to Engineering Thermodynamics~~	~~3~~	-	-

ELECTIVES: 0 to 4 credits sufficient to meet the required total 60 credits for the degree.   — 0-04

TOTAL CREDITS: 66-70 **61** - 70   — 66-70 **61 - 70**

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

ELECTIVES: 0 credits sufficient to meet the required total 60 credits for the degree.   — **0**

TOTAL CREDITS: 61 - 70   — **61 - 70**

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

^ Depending on Math placement, students may be required to select MAT 1000

4. A.S. Physics

HEGIS: 5619.00

PROGRAM CODE: 01042

FROM: **TO:**

CUNY CORE	**CREDITS**	**CUNY CORE**	**CREDITS**
REQUIRED CORE: (4 Courses, ~~14~~ **13** Credits)	~~14~~ **13**	**REQUIRED CORE:** (4 Courses, **13** Credits)	**13**
When Required Core Courses are specified for a category, they are required for the major		When Required Core Courses are specified for a category, they are required for the major	
ENG 1200 - English Composition I	3	ENG 1200 - English Composition I	3
ENG 2400 - English Composition II	3	ENG 2400 - English Composition II	3
Mathematical & Quantitative Reasoning*:	4	Mathematical & Quantitative Reasoning*:	4
Mathematical and Quantitative Reasoning*:	~~04~~ **3**	Mathematical and Quantitative Reasoning*:	**3**
		MAT 900 - College Algebra or MAT 9A0 - Algebra for STEM Majors or MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics or	
MAT 1500 – Calculus I	~~04~~ **3**	MAT 1500 – Calculus I	**3**
Life and Physical Sciences*:	4	Life and Physical Sciences*:	4
CHM 1100 - General Chemistry I		CHM 1100 - General Chemistry I	
FLEXIBLE CORE: (6 Courses, 20 Credits)	20	**FLEXIBLE CORE:** (6 Courses, 20 Credits)	20
When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.		When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.	
A. World Cultures and Global Issues		A. World Cultures and Global Issues	
B. U.S. Experience In Its Diversity		B. U.S. Experience In Its Diversity	
C. Creative Expression		C. Creative Expression	
D. Individual & Society		D. Individual & Society	
E. Scientific World*:		E. Scientific World*:	
~~MAT 1600 - Calculus II~~		-	
CHM 1200 - General Chemistry II		CHM 1200 - General Chemistry II	
		PHY 1300 – Advanced General Physics I	

DEPARTMENT REQUIREMENTS (5 to 6 8 Courses, 16 to 19 26 to 27 Credits)	16-19 26-27	DEPARTMENT REQUIREMENTS (8 Courses, 26 to 27 Credits)	26-27
PHY 1300 – Advanced General Physics I	04	-	-
PHY 1400 – Advanced General Physics II	04	-	-
AND	-	-	-
Advanced Electives (8 to 11 credits):	-	-	-
Select only ONE, Either	-	-	-
MAT 5500 – Differential Equations (3 cars.) or	3	-	-
MAT 5600 – Linear Algebra (3 cars.)	3	-	-
OR	-	-	-
Select only ONE, Either	-	-	-
EGR 2200 – Introduction to Electrical Engineering (3 cars.) or	3	-	-
EGR 2300 – Introduction to Engineering Thermodynamics (3 cars.)	3	-	-
OR	-	-	-
Select only ONE, Either	-	-	-
EPS 3300 – Physical Geology (4 cars.) or	04	-	-
EPS 3500 – Introduction to Astronomy (4 cars.) or	04	-	-
EPS 3600 – Planetology: A Trip Through the Solar System (4 cars.)	04	-	-
OR	-	-	-
PHY 81XX – Independent Study (1 to 3 cars.)	1-3	-	-
-	-	-	-
	-	**Additional Physical Sciences Requirements (4 Courses, 14 Credits)**	**14**
		PHY 1400 – Advanced General Physics II	**4**
		EGR 2200 – Introduction to Electrical Engineering (3 cars.) or	**3**
		EGR 2300 – Introduction to Engineering Thermodynamics (3 cars.)	**3**
-	-	-	-
-	-	**Select one (1) from the following:**	-
		EPS 3100 - Meteorology	
		EPS 3200 - Oceanography	
		EPS 3300 - Physical Geology	
		EPS 3500 - Introduction to Astronomy	
		EPS 3600 - Planetology: A Trip Through the Solar System	
		EPS 3800 - Introduction to Earth Science	

		Additional Mathematics Requirements (2 Courses, 6 Credits)	**6**
		Select Two (2) additional courses beyond the Mathematical and Quantitative Reasoning (MQR) course from the following:	
		MAT 1000 - College Trigonometry^	
		MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics (Recommended)	
		MAT 1500 - Calculus I (Recommended)	
		MAT 1600 - Calculus II (Recommended)	
		MAT 2100 - Calculus III	
		MAT 5500 - Differential Equations	
		MAT 5600 - Linear Algebra	
		Additional Science and Mathematics Electives (2 Courses, 6 - 7 Credits)	**6 -7**
		Elective Credits in CHM, CS, EGR, EPS, MAT, PHY, or SCI	

FROM	CREDITS	TO	CREDITS
ELECTIVES: ~~7 10~~ **0 - 1** credits sufficient to meet the required total 60 credits for the degree.	~~7 10~~ **0 - 1**	**ELECTIVES: 0 - 1** credits sufficient to meet the required total 60 credits for the degree.	**0 - 1**
TOTAL CREDITS: 60	60	**TOTAL CREDITS: 60**	60

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

^ Depending on Math placement, students may be required to select MAT 1000

5. A.S. Science for Forensics

HEGIS: 5619.00

PROGRAM CODE: 34472

FROM:

TO:

CUNY CORE	CREDITS	**CUNY CORE**	CREDITS
REQUIRED CORE: (4 Courses, ~~14~~ **13** Credits)	~~14~~ **13**	**REQUIRED CORE:** (4 Courses, **13** Credits)	**13**
When Required Core Courses are specified for a category, they are required for the major		When Required Core Courses are specified for a category, they are required for the major	

Left Column

ENG 1200 - English Composition I	3
ENG 2400 - English Composition II	3
Mathematical & Quantitative Reasoning*:	~~04~~ **3**
MAT 1500 – Calculus I	~~04~~ **3**
Life and Physical Sciences*:	4
BIO 1300 - General Biology I	

FLEXIBLE CORE: (6 Courses, 20 Credits)   20

When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.

A. World Cultures and Global Issues

B. U.S. Experience In Its Diversity

C. Creative Expression

D. Individual & Society

E. Scientific World*:

    BIO 1400 - General Biology II

    ~~MAT 1600 - Calculus II~~

DEPARTMENT REQUIREMENTS (6 Courses, ~~26~~ **25** Credits)   ~~26~~ **25**

*A cumulative grade point average of 2.50 or above, which includes BIO 1300 ~~and~~ BIO 1400, **and CHM 1100** as well as the following ~~26 credits~~ **Physical Science Courses** is required:*

~~CHM 1100 – General Chemistry I~~	~~04~~
CHM 1200 – General Chemistry II	4
CHM 3100 – Organic Chemistry I	5
CHM 3200 – Organic Chemistry II	5

Right Column

    MAT 900 - College Algebra or

    MAT 9A0 - Algebra for STEM Majors or

    MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics or

MAT 1500 – Calculus I	**3**
Life and Physical Sciences*:	4
BIO 1300 - General Biology I	

FLEXIBLE CORE: (6 Courses, 20 Credits)   20

When Flexible Core Courses are specified for a category, they are required for the major. One course from each Group A to D (Group E is satisfied by the courses shown). No more than two courses can be selected from the same discipline.

A. World Cultures and Global Issues

B. U.S. Experience In Its Diversity

C. Creative Expression

D. Individual & Society

E. Scientific World*:

    BIO 1400 - General Biology II

    CHM 1100 – General Chemistry I

DEPARTMENT REQUIREMENTS (6 Courses, **25** Credits)   **25**

*A cumulative grade point average of 2.50 or above, which includes BIO 1300, BIO 1400, **and CHM 1100** as well as the following **Physical Science Courses,** is required:*

Additional Physical Sciences Requirements (5 Courses, 22 Credits)

CHM 1200 – General Chemistry II	4
CHM 3100 – Organic Chemistry I	5
CHM 3200 – Organic Chemistry II	5

PHY 1300 – Advanced General Physics I	4	PHY 1300 – Advanced General Physics I	4
PHY 1400 – Advanced General Physics II	4	PHY 1400 – Advanced General Physics II	4

Additional Mathematics Requirement (1 Course, 3 Credits) — 3

Select one (1) additional course beyond the Mathematical and Quantitative Reasoning (MQR) course from the following:

MAT 1000 - College Trigonometry^

MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics (Recommended)

MAT 1500 - Calculus I (Recommended)

MAT 1600 - Calculus II (Recommended)

Left column:

ELECTIVES: ~~0~~ **2** credits sufficient to meet the required total 60 credits for the degree.   ~~0~~ **2**

Completion of MAT 1600 - Calculus II is highly recommended

Right column:

ELECTIVES: 2 credits sufficient to meet the required total 60 credits for the degree.   **2**

Completion of MAT 1600 - Calculus II is highly recommended

TOTAL CREDITS: 60   60   **TOTAL CREDITS: 60**   60

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

^ Depending on Math placement, students may be required to select MAT 1000

NEW COURSES

Department of Behavioral Sciences

1. PSY 4100, The Psychology of Immigration

Prerequisite: PSY 1100
Corequisite: None
Pre/Co-requisite: None
Credits: 3
Equated Credits: N/A
Hours: 3

Course Description: This course examines the psychological impact of immigration and how immigrants navigate in American society. This course will provide students with a brief overview of our postcolonial history, cultural genocide in residential schools, the problem with the Model Minority Myth, developmental problems in satellite babies, stigma of mental illness among immigrant communities, the role of culture and food, living as migrant workers, the meaning of citizenship, feeling sage in an age of xenophobia, and the importance of immigrants supporting Black Lives Matter movement.   Students who take this class will have a better understanding of the role of immigration and the lived experiences of immigrants, become more civically engaged in their communities, and be more culturally competent

Department of Mathematics and Computer Science

1. MAT **8A0** Math for Everyday

Prerequisite: For students who are eligible for a corequisite course per CUNY Math placement guidelines and likely to benefit from some developmental support, eligibility determined as follows (1) Score 40-56 on Elementary Algebra portion of the ACCUPLACER CUNY Assessment Test in Math, or (2) passed MAT M100, or (3) passed a Kingsborough workshop culminating in passing the Departmental MAT M100 final exam, or (4) Appropriate corequisite designation.

Corequisite: None
Pre/Co-requisite: None
Credits: 3 **plus**
Equated Credits: 4 equated credits
Hours: 7

Course Description: This course is designed to provide non-STEM students with critical-thinking and mathematical skills useful in making informed decisions on many aspects of modern life involving quantitative concepts. This course provides the qualitative reasoning skills for informed citizens to understand the world around them and to make choices affecting their lives. Topics include basic probability and risk assessment, financial math, data analysis, solution of elementary algebraic equations, modeling from data in perspective, mathematics of finance, investments and loans, statistical reasoning, probability, and risk assessment. **Students who have completed MAT 800 will not receive credit for this course.** This course is appropriate for non-STEM major students. This course is NOT intended for students planning on taking MAT 900 - College Algebra.

2. MAT 9A0, Algebra for STEM Majors

Prerequisite: For students who are eligible for a corequisite course per CUNY Math placement guidelines and likely to benefit from some developmental support, eligibility determined as follows (1) Score 40-56 on Elementary Algebra portion of the ACCUPLACER CUNY Assessment Test in Math, or (2) passed MAT M100, or (3) passed a Kingsborough workshop culminating in passing the Departmental MAT M100 final exam, or (4) Appropriate corequisite designation.

Corequisite: None
Pre/Co-requisite: None
Credits: 3 **plus**
Equated Credits: 5 equated credits
Hours: 8

Course Description: A comprehensive treatment of the following: real numbers, absolute value, integer and rational exponents, polynomial operations, factoring techniques, roots and radicals, linear and quadratic equations, graphing techniques, systems of linear equations, Gaussian elimination. Introduces the study of functions in preparation for the study of pre-calculus and calculus. **Students who have completed MAT 900 will not receive credit for this course.** This course is appropriate for STEM majors.

3. MAT 3000, Introduction to Mathematical Concepts in
Proof
Prerequisite: MAT 1400
Corequisite: None
Pre/Co-requisite: None
Credits: 1
Equated Credits: N/A
Hours: 2

Course Description: This course introduces majors in mathematics to the critical skill of reading and writing formal proofs; and serves as a bridge to the more advanced mathematics they will study at the baccalaureate level and beyond. Expected topics include: basic set theory, logic counting principles, direct proof, contrapositives, contradictions, non-conditionals, counterexamples, induction, relations, functions, and cardinality.

Department of Physical Sciences

PSQ 1001 - Quantitative Skills for Physical Sciences I

PSQ 1002 - Quantitative Skills for Physical Sciences II

PSQ 1003 - Quantitative Skills for Physical Sciences III

PSQ 1004 - Quantitative Skills for Physical Sciences IV

Prerequisite: None

Corequisite: CHM11 Skills Proficient, PHY1100 Skills Proficient, PHY1300 Skills Proficient, PHY1400 Skills Proficient, EGR2200 Skills Proficient, or EGR2300 Skills Proficient determination. Contact Department of Physical Sciences for Skills Proficient information

Pre/Co-requisite: None
Credits: 0
Equated Credits: 1
Hours: 2hrs for 12 weeks for 3 modules of 4 weeks each

Course Description: Composed of co-requisite support modules in various basic math skills required in the physical sciences. This course is non crediting bearing and is not equivalent to any MAT course.

Skills Modules:
1. Basic skills of algebra required in the physical sciences.
2. Basic skills of geometry required in the physical sciences.
3. Basic skills of trigonometry required in the physical sciences.
4. Basic skills of vector products required in the physical sciences.
5. Basic skills of differential calculus required in the physical sciences.
6. Continuation of basic skills of differential calculus required in the physical sciences.
7. Basic skills of integral calculus required in the physical sciences.
8. Basic skills in series expansion required in the physical sciences.
9. Basic skills in linear algebra required in the physical sciences.
10. Basic skills in differential equations required in the physical sciences.

COURSES FOR PATHWAYS APPROVAL
**Department of Behavioral Sciences and Human
Services**

1. PSY 4100, The Psychology of Immigration, Flexible
Core: U.S. Experience in its Diversity (Group B)   **Accepted, pending changed application**

Department of Mathematics and Computer Science

1. MAT 8A0**,** Math for Everyday, Required Core,
Mathematical and Quantitative Reasoning (MQR)

The following learning outcomes were distilled from the pathways Learning Outcomes process and list. They will go into effect immediately in 2019-2020.

GENERAL EDUCATION LEARNING OUTCOMES

A student will:

1. Gather, interpret, and assess information from a variety of sources and points of view
2. Evaluate evidence and arguments critically or analytically
3. Produce well-reasoned written or oral arguments using evidence to support conclusions
4. Apply quantitative reasoning skills to solve problems
5. Demonstrate Knowledge of Human Cultures and the Physical and Natural World through the study of:
     • World Cultures and Global Issues
     • U.S. Experience in its Diversity
     • Creative Expression
     • Individual and Society
     • Scientific World
6. Describe civic engagement and its importance in a global society

* * * THE FOLLOWING ARE INFORMATIONAL ITEMS FOR COLLEGE COUNCIL * * *

CHANGES IN EXISTING COURSES

Department of Art

Change: Course Title

1. ART 5500, Design I

FROM:	TO:
Design I	Design **Foundations**

2. ART 5600, Design II

FROM:	TO:
Design II	**3-Dimensional Design**

3. ART 7400, Experimental Typography

FROM:	**TO:**
Experimental Typography	**Typography**

Department of Business

Change: Prerequisite

1. BF 3500 Textile and Non-Textile Analysis

FROM:	**TO:**
Prerequisite(s): RM 3100 or BF 3100	Prerequisite(s): RM 3100 or BF 3100. **RM 3100 or BF 3100 Not required for Fashion Design Majors**

Department of Health, Physical Education, and Recreation

Change: Course Title and Description

1. RPE 1100, Introduction to Recreation

FROM:	**TO:**
Introduction to Recreation	Introduction to Recreation **and Physical Education**

FROM:	**TO:**
Historical and philosophical foundations of recreation and leisure, study of institutions providing recreation services, and the socio-economic factors which influence the growth and development of recreation.	**Explore historical and philosophical foundations of recreation/recreation therapy and physical education and the study of the variety of organizations that provide those programs. Examine topics that include an analysis of play, games, sport and fitness as related to the development of personal interests among clients and students.**

2. RPE 1200, Leadership in Recreation and Physical Education

FROM:	**TO:**
Leadership in Recreation and Physical Education	Leadership in Recreation, Physical Education**, and Sport Management**

FROM:	**TO:**
Leadership, supervision, group dynamics, and proper teaching techniques in leisure services. Additional topics include conflict resolution, behavior management, values and ethics, and risk management	**Learn various leadership styles, supervision, group dynamics, and proper teaching techniques. Additional topics include conflict resolution, behavior management, values and ethics, and risk management. Examines professional organizations in physical education teaching, recreation and recreation therapy, and sport management.**

3. RPE 1400, Outdoor Recreation

FROM:

Outdoor Recreation

FROM:

Trends in outdoor recreation, place of the recreation leader in outdoor programs, scope and extent of programs in conservation, camping, aquatics and nature. Weekend camping trip required.

TO:

Camping and Outdoor Recreation

TO:

Explore trends in outdoor recreation, the role of the recreation leader, the scope and extent of programs in conservation, camping, and nature. A weekend 24 hour faculty supervised camping and hiking trip is required, as well as participation in two 4 hour training and preparation sessions, prior to camping outdoors. Small group work is organized to accomplish assignments. Individual journals and a final paper reflecting their experiences are required.

4. RPE 7000, Methods of Teaching Fitness and Recreation Activities

FROM:

 Methods of Teaching Fitness and Recreation Activities

FROM:

Develop techniques, methods, skills and philosophy required to teach fitness and recreation activities.

TO:

Introduction to Teaching Methods in Physical Education

TO:

Develop and execute a lesson plan for an activity, using the New York State Learning Standards for Physical Education, while receiving feedback from peers and instructor. Examine curriculum and instruction in physical education, the role and function of professional organizations, and develop a personal philosophy of physical education.

Change: Course Title, Description and Prerequisite:

5. RPE 3200, Organization and Administration of Recreation Programs

FROM:

Organization and Administration of Recreation Programs

FROM:

TO:

Organization and Administration of Recreation**, Physical Education, and Sport Management**

TO:

Underlying principles for effective recreation programming, considers operation of recreation facilities, including budget, public relations, records, reports, equipment and evaluation.

Examine the principles of organization and administration of recreation, physical education, sport program and facilities. Focuses on developing effective programming inclusive of: a mission statement/goals/objectives, needs assessment, facility planning, program implementation and evaluation, learn effective communication, and address budget, public relations, risk management/safety, and personnel/supervision issues. Requirement to attend two college wide events and evaluate one as an operations manager.

FROM:

Prerequisite(s): RPE 1100, RPE 1200, RPE 1600, and RPE 3100. For Program Majors only.

TO:

Prerequisite(s): RPE 1100, RPE 1200, and RPE 3100. RPE 3100 Not required for Sports Management students

Prerequisite(s)/Corequisite(s): RPE 9152

Prerequisite(s)/Corequisite(s): RPE 9152

6. RPE 9152, Field Experience in Physical Education, Recreation, and Recreation Therapy

FROM:

Field Experience in Physical Education, Recreation, and Recreation Therapy

TO:

Field Experience in Physical Education, Recreation/Recreation Therapy, **Sport Management**

FROM:

TO:

Students are assigned to supervised field work in a variety of community recreation agency settings. One-hour seminar, field reports and class discussions of the experiences are included.

Experience and complete 100 hours of supervised fieldwork in either a public or private school physical education program, community recreation setting, or therapeutic recreation program. A weekly one-hour seminar covers diversity, leadership, ethics and values, assessment, and development of resume/cover letter. Works in small teams to develop, implement, and evaluate a student run activity. Maintain reflective logs of experiences throughout the semester.

FROM:

Prerequisite(s): RPE 1100, RPE 1200, RPE 1600, and RPE 3100. For Program Majors only.

TO:

Prerequisite(s): RPE 1100, RPE 1200, and RPE 3100. RPE 3100 Not required for Sports Management students

Prerequisite(s)/Corequisite(s): RPE 3200

Prerequisite(s)/Corequisite(s): RPE 3200

Change: Course Description

7. HPE 1500, Fitness Assessment and Prescription

FROM:

TO:

Principles of physical fitness are taught. Students undergo a battery of fitness tests and develop a personal fitness program.

Learn principles of physical fitness. Complete a variety of fitness tests and create a personal fitness program including aerobic and anaerobic activities. Develop muscular strength and endurance; improve body composition, cardiovascular fitness, and flexibility. Learn the variety of tools/equipment to achieve physical fitness.

8. PEC 200, Walk, Jog, Run

FROM:

TO:

Introduction to the principles and practices for assessing and improving cardiovascular fitness.

Examine the principles and practices for assessing and improving cardiovascular fitness. Design a personal cardiovascular fitness program and receive individualized instruction. Learn to use proper progression to improve aerobic fitness

9. PEC 400, Training with Weights

FROM:

TO:

Study of weight training techniques to increase muscle strength and endurance in relation to various sports activities and to improve physical appearance.

Learn weight training techniques to increase muscle strength and endurance for a specific sport activity and/or improve overall physical fitness. Learn proper progression and design a weight training program to suit personal needs.

10. PEC 1200, Tennis 3

FROM:

TO:

Introduction to intermediate tennis skills: the lob, mid- court volley, flat and slice serves, ball spin, and use of offensive strategy in competition.

Introduction to intermediate tennis skills: top spin, slice, attacking the net, offensive and defensive strategy in competition. Apply tennis skills in single and doubles game situations.

11. PEC 1500, Badminton

FROM:

TO:

Basic skills play, knowledge of rules, offensive and defensive strategy.

Learn to play badminton, knowledge of rules, and offensive and defensive strategy. Learn badminton skills: serving, underhand, backhand, overhead, drop shot, smash, and racquet grip. Learn singles and doubles game play.

12. PEC 1900, Aerobic Dance

FROM:

TO:

A fitness program that combines vigorous calisthenics exercises with dance steps to music for improved cardiovascular endurance, muscles toning and flexibility.

Learn vigorous calisthenics exercises with dance steps to music to improve cardiovascular endurance and muscle toning. Apply aerobic activities for health and wellness, boost mood, burn calories, and improve body composition and flexibility.

13. RPE 1300, Social Recreation

FROM:

TO:

How to conduct, plan and program social recreation activities in camps, centers, clubs, institutions and playgrounds. Under supervision, leadership is developed and performance evaluated.

Learn to assess, plan, implement, and evaluate an inclusive social recreation activity in camps, recreation centers, clubs, healthcare facilities, and playgrounds. Under supervision, opportunities are provided to develop leadership skills in recreation. Develop, implement, and evaluate an activity protocol. Learn special even planning, group dynamics, and effective teaching techniques.

14. RPE 3100, Therapeutic Recreation for Individuals with Disabilities I

FROM:

TO:

The philosophy and history of Therapeutic Recreation (TR). The physical, social and psychological barriers to access as well as the principles of normalization and inclusion. An emphasis on the TR process and provision of a continuum of services based on clients' needs. Students learn how to adapt activities (e.g., aquatics, arts and crafts, dance) to meet the needs, interests and abilities of individuals with specific disabilities.

Learn the philosophy and history of Therapeutic Recreation (TR). Explore accessibility barriers as well as the principles of normalization and inclusion for individuals with special needs. An emphasis on the TR process and provision of a continuum of services based on clients' needs. Examine principles of adapting activities and environments to meet the needs, interests and abilities of individuals with physical and/or development disabilities. Attend one filed observation in a setting for individuals with special needs.

15. RPE 3500, Therapeutic Recreation for Individuals with Disabilities II

FROM:

TO:

The biopsychosocial approach to understanding the later part of the lifespan and the contribution leisure and recreation make to quality of life. A continuum of services in a range of settings is examined. Students acquire an understanding of normal and abnormal psychological and emotional development. Students learn how to plan recreation programs to meet the needs of the elderly and those with emotional/psychological disorders.

Examine the biopsychosocial approach to the later part of the lifespan and the contribution leisure and recreation make to quality of life. Acquire an understanding of normal and abnormal psychological and emotional development. Learn to plan recreation programs that meet the needs of the seniors and those with emotional/psychological disorders in both clinical and community settings. Attend one clinical field observation.

16. RPE 3600, Assessment Process in Therapeutic Recreation

FROM:

TO:

Through clinical case simulations and analysis of videotaped interviews with patients, students will gain competency developing individualized treatment goals for patients. Practice in observation, reporting and writing various types of documentation, including parts of the MDS (Minimum Data Set) Plus and other assessments. Assessment as it applies to Long Term Care and Psychiatric populations will also be covered in the course.

Gain competency in using assessment tools in behavioral observation of clinical case simulations and analysis of video interviews with individuals that have special needs. Explore various Therapeutic Recreation models of practice for use in clinical and community based settings. Learn principles and practices of developing individualized treatment plans based on assessment data. Study methodology for completing an activity and developing a program protocol.

17. RPE 4000, Sport and American Society

FROM: **TO:**

The development of selected sports as well as related contemporary and controversial issues in America approached from a sociological point of view. Additional topics include economic and media influences, and future trends.

Explore the significant interrelationship of sport in American society and internationally. Apply sociological theories of functionalist, conflict, critical, and interactionist to study sport in society. Discuss contemporary and controversial issues inclusive of gender equity, drug use, youth sport, and race. Study the symbiotic relationship of sport, business, economy, and media.

18. RPE 4600, Facilities Planning in Sports

FROM: **TO:**

The principles, guidelines and recommendations for planning, constructing, using and maintaining sports facilities.

Learn principles, guidelines and recommendations for planning, constructing, using and maintaining sports facilities. Explore financing, public and private partnerships, Americans with Disabilities Act, and risk management in sport facilities. Study crowd and emergency management, facility alcohol plan, concession and box office operations.

Department of Mathematics and Computer Science

Change: Course Description

1. MAT 4A0, Math and Quantitative Reasoning

FROM: **TO:**

This course enhances students' quantitative reasoning and mathematical skills useful in solving problems in mathematics and in other fields of study. Students learn to communicate solutions to mathematical problems in written and oral form. Topics include mathematical modeling, financial mathematics, units, percentages and statistical reasoning.

This course enhances students' quantitative reasoning and mathematical skills useful in solving problems in mathematics and in other fields of study. Students learn to communicate solutions to mathematical problems in written and oral form. Topics include mathematical modeling, financial mathematics, units, percentages and statistical reasoning. **Students who have completed MAT 500 will <u>not</u> receive credit for this course. This course is intended for Non-STEM majors. This course is NOT intended for students planning on taking MAT 900 - College Algebra.**

2. MAT 800, Practical Math for Today's World

FROM:

Critical-thinking and mathematical skills useful in making informed decisions on many aspects of modern life involving quantitative concepts. Topics include logical analysis and inference, mathematics of finance, statistical reasoning and probability.

TO:

Critical-thinking and mathematical skills useful in making informed decisions on many aspects of modern life involving quantitative concepts. Topics include logical analysis and inference, mathematics of finance, statistical reasoning and probability. **Students who have completed MAT 8A0 will not receive credit for this course. This course is intended for Non-STEM majors. This course is NOT intended for students planning on taking MAT 900 - College Algebra.**

3. MAT 900, College Algebra

FROM:

A comprehensive treatment of the following: real numbers, absolute value, integer and rational exponents, polynomial operations, factoring techniques, roots and radicals, linear and quadratic equations, graphing techniques, systems of linear equations, and Gaussian elimination. Introduces the study of functions in preparation for the study of pre-calculus. Demonstration of proficiency in subject matter via departmental final exam is required for successful completion.

TO:

A comprehensive treatment of the following: real numbers, absolute value, integer and rational exponents, polynomial operations, factoring techniques, roots and radicals, linear and quadratic equations, graphing techniques, systems of linear equations, and Gaussian elimination. Introduces the study of functions in preparation for the study of pre-calculus. Demonstration of proficiency in subject matter via departmental final exam is required for successful completion. **Students who have completed MAT 9A0 will <u>not</u> receive credit for this course.**

Change: Prerequisite and Course Description

4. MAT 500, Introduction to Mathematical Thought

FROM:

This course emphasizes quantitative reasoning skills for informed citizens to understand the world around them. Topics include basic probability, data analysis, solution of elementary Algebraic equations, word problems and modeling data. This course is intended for Non-STEM majors. This course is NOT intended for students planning on taking MAT 900 - College Algebra

TO:

This course emphasizes quantitative reasoning skills for informed citizens to understand the world around them. Topics include basic probability, data analysis, solution of elementary Algebraic equations, word problems and modeling data. **Students who have completed MAT 4A0 will <u>not</u> receive credit for this course.** This course is intended for Non-STEM majors. This course is NOT intended for students planning on taking MAT 900 - College Algebra

FROM:

TO:

Prerequisite(s): (1) Score of 40-56 on the Elementary Algebra portion of the ACCUPLACER CUNY Assessment Test in Math or (2) passed MAT M100 or (3) passed a Mathematics Department workshop culminating in passing the Departmental MAT M100 final exam

Prerequisite(s): For students who are eligible for a corequisite course per CUNY Math placement guidelines and likely to benefit from some developmental support, eligibility determined as follows: (1) Score of 40-56 on the Elementary Algebra portion of the ACCUPLACER CUNY Assessment Test in Math or (2) passed MAT M100 or (3) passed a Mathematics Department workshop culminating in passing the Departmental MAT M100 final exam **or (4) Appropriate corequisite designation.**

Change: Prerequisite

5. MAT 1000, Trigonometry

FROM:
Prerequisite(s): MAT 900

TO:
Prerequisite(s): MAT 900 **or MAT 9A0**

6. MAT 1100, Finite Mathematics

FROM:
Prerequisite(s): MAT 900

TO:
Prerequisite(s): MAT 900 **or MAT 9A0**

7. MAT 1300, Survey of Mathematics and Computer Concepts

FROM:

TO:

Prerequisite(s): (1) Successful completion of the Elementary Algebra portion of the ACCUPLACER CUNY Assessment Test in Math and a score of 55 or higher on the College Level Math portion of the ACCUPLACER CUNY Assessment Test in Math, or (2) Successful completion of Pre-Algebra and a grade of 45 or higher on the Elementary Algebra portion of the CUNY Mathematics Skills Test (COMPASS), or (3) Successful completion of Pre-Algebra and successful completion of a Kingsborough Math MAT M200 workshop culminating in a grade of 88 or higher on the CEAFE exam, or (4) Successful completion of Pre-Algebra and an "S" grade in MAT M200 taken at Kingsborough; or (5) MAT R300

Prerequisite(s): **(1)** MAT R300 **or (2)** Successful completion of the Elementary Algebra portion of the ACCUPLACER CUNY Assessment Test in Math and a **minimum** score of 55 on the College Level Math portion of the ACCUPLACER CUNY Assessment Test in Math

8. MAT 19A0, Statistics and Probability in Today's World

FROM:

TO:

Prerequisite(s): (1) Successful completion of the Elementary Algebra portion of the ACCUPLACER CUNY Assessment Test in Math and a score of 55 or higher on the College Level Math portion of the ACCUPLACER CUNY Assessment Test in Math, or (2) Successful completion of Pre-Algebra and a grade of 45 or higher on the Elementary Algebra portion of the CUNY Mathematics Skills Test (COMPASS), or (3) Successful completion of Pre-Algebra and successful completion of a Kingsborough Math MAT M200 workshop culminating in a grade of 88 or higher on the CEAFE exam, or (4) Successful completion of Pre-Algebra and an "S" grade in MAT M200 taken at Kingsborough; or (5) MAT R300

Prerequisite(s): **(1)** MAT R300 **or (2)** Successful completion of the Elementary Algebra portion of the ACCUPLACER CUNY Assessment Test in Math and a **minimum** score of 55 on the College Level Math portion of the ACCUPLACER CUNY Assessment Test in Math

9. BIO/MAT 9100, Biostatistics

FROM:

Prerequisite(s): MAT 900

TO:

Prerequisite(s): MAT 900 **or MAT 9A0**

Change: Prerequisite and Credit/Hours

10. MAT 1400, Analytic Geometry & Pre-Calculus

FROM:

4 credits, 4 hours

TO:

3 credits, 4 hours (2 hours lecture, 2 hours lab)

FROM:

Prerequisite(s): MAT 900

TO:

Prerequisite(s): MAT 900 **or MAT 9A0**

Change: Credits/Hours

11. CS 1200, Introduction to Computing

FROM:

4 credits, 4 hours

TO:

3 credits, 4 hours (2 hours lecture, 2 hours lab)

12. CS 3500, Discrete Structures

FROM:

4 credits, 5 hours

TO:

3 credits, 4 hours (2 hours lecture, 2 hours lab)

13. CS 3700, Data Structures

FROM:

4 credits, 4 hours

TO:

3 credits, 4 hours (2 hours lecture, 2 hours lab)

14. MAT 1500, Calculus I

FROM:

4 credits, 4 hours

TO:

3 credits, 4 hours (2 hours lecture, 2 hours lab)

15. MAT 1600, Calculus II

FROM:

4 credits, 4 hours

TO:

3 credits, 4 hours (2 hours lecture, 2 hours lab)

16. MAT 2100, Calculus III

FROM:

4 credits, 4 hours

TO:

3 credits, 4 hours (2 hours lecture, 2 hours lab)

Department of Physical Sciences

Change: Pre-/Co-requisites:

1. CHM 100, Review of General Chemistry

FROM:

Prerequisite(s)/Corequisite(s): MAT 900

TO:

Prerequisite(s)/Corequisite(s): MAT 900 **or MAT 9A0, or Department Permission**

2. CHM 200, Introduction to Green Chemistry

FROM:

Prerequisite(s)/Corequisite(s): MAT 900

TO:

Prerequisite(s)/Corequisite(s): MAT 900 **or MAT 9A0, or Department Permission**

3. PHY 100, Preview of General Physics

FROM:

Prerequisite(s)/Corequisite(s): MAT 900

TO:

Prerequisite: MAT 900 or MAT 9A0

Prerequisite(s)/Corequisite(s): **NONE**

4. PHY 1300, Advanced General Physics I

FROM:

Prerequisite(s)/Corequisite(s): MAT 1500

TO:

Prerequisite(s)/Corequisite(s): MAT 1500; **OR PHY 1300 Skills Proficient; OR Department Permission. Contact Department of Physical Sciences for PHY 1300 Skills Proficient information**

5. PHY 1400, Advanced General Physics II

FROM:

Prerequisite(s): PHY 1300

TO:

Prerequisite(s): PHY 1300

Prerequisite(s)/Corequisite(s): MAT 1600

Prerequisite(s)/Corequisite(s): MAT 1600 **OR PHY1400 Skills Proficient; OR Department Permission. Contact Department of Physical Sciences for PHY 1400 Skills Proficient information**

Change: Prerequisite

6. CHM 1100, General Chemistry I

FROM:

Prerequisite(s): MAT 900 or a passing score on the ACCUPLACER CUNY Assessment Test in Math or completion of developmental mathematics and either CHM 100 or CHM 200, or passing score on chemistry exemption exam. Contact Department for Chemistry Exemption Exam information.

TO:

Prerequisite: MAT 900 **or MAT 9A0 and** CHM 100; **OR CHM 1100 Skills Proficient; OR Department Permission. Contact Department of Physical Sciences for CHM 1100 Skills Proficient information.**

7. CHM 1200, General Chemistry II

FROM:

Prerequisite(s): CHM 1100

TO:

Prerequisite: CHM 1100; **OR Department Permission**

8. CHM 3100, Organic Chemistry I

FROM:

Prerequisite(s): CHM 1200

TO:

Prerequisite: CHM 1200; **OR Department Permission**

9. CHM 3200, Organic Chemistry II

FROM:

Prerequisite(s): CHM 3100

TO:

Prerequisite: CHM 3100; **OR Department Permission**

10. EPS 3100, Meteorology

FROM:

TO:

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math or Department permission

Prerequisite: **CUNY English & Math Proficient; OR Department Permission**

11. EPS 3200, Oceanography

FROM:

TO:

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math or Department permission

Prerequisite: **CUNY English & Math Proficient; OR Department Permission**

12. EPS 3300, Physical Geography

FROM:

TO:

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math or Department permission

Prerequisite: **CUNY English & Math Proficient; OR Department Permission**

13. EPS 3500, Introduction to Astronomy

FROM:

TO:

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math or Department permission

Prerequisite: **CUNY English & Math Proficient; OR Department Permission**

14. EPS 3600, Planetology: A Trip Through the Solar System

FROM:

TO:

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math or Department permission

Prerequisite: **CUNY English & Math Proficient; OR Department Permission**

15. EPS 3800, Introduction to Earth Science

FROM:

TO:

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math or Department permission

Prerequisite: **CUNY English & Math Proficient; OR Department Permission**

16. PHY 1100, General Physics I

FROM:

Prerequisite(s): MAT 1400

TO:

Prerequisite(s): **NONE**

Prerequisite(s)/Corequisite(s) MAT 1400; OR PHY 1100 Skills support; OR Department Permission. Contact Department of Physical Sciences for PHY 1100 Skills support information.

17. PHY 1200, General Physics II

FROM:

Prerequisite(s): PHY 1100

TO:

Prerequisite(s): PHY 1100 **OR Department Permission**

18. PHY 4200, Ideas of Modern Physics

FROM:

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math

TO:

Prerequisite: **CUNY English & Math Proficient; OR Department Permission**

19. SCI 3700 - Developments in the Physical Sciences (with Laboratory)

FROM:

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math

TO:

Prerequisite: **CUNY English & Math Proficient; OR Department Permission**

20. SCI 5100, Physical Sciences and the Environment (with Laboratory)

FROM:

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math

TO:

Prerequisite: **CUNY English & Math Proficient; OR Department Permission**

21. SCI 7000 - The Science of Nutrition (with Laboratory)

FROM:

TO:

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math

Prerequisite: **CUNY English & Math Proficient; OR Department Permission**

Change: Prerequisite and Corequisite:

22. EGR 2100, Engineering Design

FROM:

TO:

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading and Writing and MAT 900

Prerequisite(s): Passed, exempt, or completed developmental course work for the CUNY Assessment Tests in Reading and Writing and MAT 900 **or MAT 9A0**

Corequisite(s): MAT 1400

Corequisite: NONE

Prerequisite(s)/Corequisite(s): MAT 1400; OR Department Permission

23. EGR 2200, Introduction to Electrical Engineering

FROM:

TO:

Prerequisite(s): MAT 2100 and PHY 1400

Prerequisite: **PHY 1400 OR Department Permission**

Corequisite(s): MAT 5500

Corequisite(s): **NONE**

Prerequisite(s)/Corequisite(s): MAT 5500 and MAT 5600; OR EGR 2200 Skills support, OR Department Permission. Contact Department of Physical Sciences for EGR2200 Skills support information.

24. EGR 2300, Introduction to Engineering Thermodynamics

FROM:

TO:

Prerequisite(s): CHM 1200 and PHY 1400

Prerequisite: CHM1200 and **PHY130**0 **and MAT1600**; **OR EGR 2300 Skills Support; OR Department Permission. Contact Department of Physical Sciences for EGR 2300 Skills Proficient information.**

Corequisite(s): CS 1200

Corequisite(s): **NONE**

COURSES WITHDRAWN

Department of Mathematics and Computer Science

1. MAT 600, Mathematics of Finance

E. Strategic Planning Committee Report

The following resolution was passed unanimously but after discussion was amended to remove the italicized section titled "Institutional Learning Goals." That section will be discussed and revisited by the Committee beginning with its meeting on Wednesday May 30, 2019 at 3:00 PM with its new additional members:

WHEREAS, The Strategic Planning Committee, as part of a periodic review of the Kingsborough Community College Mission Statement, has gathered input from the College community and updated the Statement to reflect those ideas,

And WHEREAS, Based upon this input, the Committee has formulated an updated Vision Statement and a new Statement of Values,

BE IT THEREFORE RESOLVED, That the following will be the Kingsborough Community College Statements of Mission, Vision, and Values:

MISSION STATEMENT:

Kingsborough Community College responds to the needs of its diverse community by offering high quality, affordable, innovative, student-centered programs of study that prepare graduates for transfer and the workforce. The college strives for equity and seeks to provide each student with the appropriate resources and supports to foster success.

This section was removed from the Resolution after discussion:
Institutional Learning Goals:

To earn a degree, students are expected to complete the general education requirements of CUNY's Pathways, as well as the course of study in a major discipline. Kingsborough aspires for all graduates to achieve the following institutional learning outcomes in the course of these studies:

1.   Critical thinking: The student will identify, analyze, and solve problems in a variety of situations and areas of study.

2.   Global perspective: The student will understand similarities and differences among diverse cultural and historical perspectives as well as individual civic responsibilities and democratic engagement.

3.   Communication: The student will speak, read, write, and/or listen effectively.

VISION:

Kingsborough Community College encourages students to take an active role in their own learning. The College strives for high quality and continuous improvement in all areas related to student learning, including academic programs, teaching, student services, administration and support, and the campus environment.

VALUES:

Respect - Civility, acceptance, appreciation, and support of individual differences

Diversity - The proactive fostering of greater inclusion and ultimately equity at every level of college life

Integrity - Fair and ethical standards in all policies, procedures, and practices

Excellence - High quality teaching, student services, administration, and community engagement; and high standards for student achievement

Accountability - Taking responsibility for our actions and outcomes

Innovation - Creative thinking and approaches that enhance learning and support continuous improvement

F. **Instructional Committee Report**

Although the Instructional Committee submitted two resolutions for the Meeting Agenda, they presented only the following single resolution at the Council meeting. In addition, the committee hand-distributed a version of the resolution which had been slightly edited from that which had been submitted for the Agenda; the last sentence was added after the Steering Committee version had been approved. In the end it was included in this Resolution and approved:

WHEREAS, currently there is no statement of the alphanumeric grading equivalences at Kingsborough Community College; and

WHEREAS, the Instructional Committee of the College Council believes that a statement of the alphanumeric grading equivalences at Kingsborough Community College would be beneficial to the students and the faculty in terms of uniform expectations and grading norms;

BE IT THEREFORE RESOLVED, that the following alphanumeric grading equivalencies be inserted into the college catalog, along with a statement about the grade of D- and a statement about exceptions concerning departments or programs for which external accreditation criteria determine alphanumeric grading equivalences:

The college interprets alphanumeric grading equivalences, with certain exceptions noted below, according to the following general guidelines:

Alpha/numeric equivalences:

A+	97-100
A	93-96
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	60-66
F	0-59

It should be noted that the above alphanumeric equivalences apply to final course grades; instructors may choose to assign a D- grade to particular assignments, exams, or other elements of coursework, but the college does not permit the use of a D- grade for the final course grade.

Departments or programs with external accreditation criteria reserve the option of publishing department- or program-specific guidelines, and individual instructors reserve the option of publishing course-specific guidelines. However, any departures from the above equivalences must be published in the course syllabus and distributed to students at the start of the semester.

There was a great deal of discussion over the merits of this proposal and its impact on students, faculty, the grading process, and transferability of Kingsborough course grades to other institutions. Several votes were taken during the course of discussion:

There was a motion to table the resolution and return it to the Instructional Committee. That motion was defeated by a vote of 14-13.

Prof. Cally challenged the presence of a quorum at the meeting, but a quorum was found to be present based on the signed attendance sheet.

Prof. Sokolow moved to call the question to a vote, and that motion passed by a vote of 15-4.

When a vote was taken to pass the resolution as written, the Resolution passed by a final vote of 18-12.

In the absence of new business, the meeting adjourned at 4:15 PM.

Respectfully submitted,

Michael Sokolow

Michael Sokolow, Secretary

Meeting II: First meeting of the 2019-2020 College Council

Unanimous nominations and elections were held for Prof. Edward Martin as the final Faculty/Staff member to join the 2019-2020 Committee on Committees, and for Anthony Ng and Dmytro Khodubin as student members of the Committee on Committees.

Members of the Committee on Committees, and date their terms expire:

Prof. Rick Repetti 2020

Prof. Michael Barnhart 2020

Ms. Judy Cohen 2020

Prof. Michael Sokolow 2020

Prof. Katia Perea 2020

Prof. Don Hume 2021

Prof. Edward Martin 2021

Dmytro Khodubin 2020

Anthony Ng.....................................2020

Newly-elected and reelected Council members were then confirmed to their Committee assignments during a short meeting of the Committee on Committees:

Curriculum: Profs. Alley-Young, Dawson, Garcia-Osuna, Lax, Martin, Murphy, Weeks; students Augustin, Compere, Fang, Marty.

Instruction: Profs. Murphy-Smith, Taras, Washburn (remaining in current assignment); students Ali, Montgomery, Ng, Vargas.

Legislative: Profs. Greene, Pollack, Tila, Mr. Rohrlich; students Prillman, Tomsky, Vaknin, Zabin.

Strategic Planning: Profs. Levy and Rozenboym, Ms. Daly, Mr. Springle; students Hamza, Khudobin, Ovetskiy, Stanislaus.

Students: Profs. Delgado and Ricciardi; students Hinds, Holder, Khalid, Quinonez.

The Committees then elected their 2019-2020 officers:

Curriculum: Prof. Martin, chair; Ms. Amanda Kalin, secretary.

Instruction: Prof. Repetti, chair.

Legislative: Prof. Sokolow, chair.

Strategic Planning: V.P. Fox, chair; Ms. Maureen Daly, secretary.

Students: Prof. Ricciardi, chair.