

KINGSBOROUGH COMMUNITY COLLEGE
The City University of New York

CURRICULUM TRANSMITTAL COVER PAGE

Department: _____ Date: _____

Title Of Course/Degree/Concentration/Certificate: _____

Change(s) Initiated: (Please check)

- | | |
|---|---|
| <input type="checkbox"/> Closing of Degree | <input type="checkbox"/> Change in Degree or Certificate |
| <input type="checkbox"/> Closing of Certificate | <input type="checkbox"/> Change in Degree: Adding Concentration |
| <input type="checkbox"/> New Certificate Proposal | <input type="checkbox"/> Change in Degree: Deleting Concentration |
| <input type="checkbox"/> New Degree Proposal | <input type="checkbox"/> Change in Prerequisite, Corequisite, and/or Pre/Co-requisite |
| <input type="checkbox"/> New Course | <input type="checkbox"/> Change in Course Designation |
| <input type="checkbox"/> New 82 Course (Pilot Course) | <input type="checkbox"/> Change in Course Description |
| <input type="checkbox"/> Deletion of Course(s) | <input type="checkbox"/> Change in Course Title, Number, Credits and/or Hours |
| | <input type="checkbox"/> Change in Academic Policy |
| | <input type="checkbox"/> Pathways Submission: |
| | <input type="checkbox"/> Life and Physical Science |
| | <input type="checkbox"/> Math and Quantitative Reasoning |
| | <input type="checkbox"/> A. World Cultures and Global Issues |
| | <input type="checkbox"/> B. U.S. Experience in its Diversity |
| | <input type="checkbox"/> C. Creative Expression |
| | <input type="checkbox"/> D. Individual and Society |
| | <input type="checkbox"/> E. Scientific World |
- Change in Program Learning Outcomes
- Other (please describe): _____

PLEASE ATTACH MATERIAL TO ILLUSTRATE AND EXPLAIN ALL CHANGES

DEPARTMENTAL ACTION

Action by Department and/or Departmental Committee, if required:

Date Approved: _____ Signature, Committee Chairperson: _____

If submitted Curriculum Action affects another Department, signature of the affected Department(s) is required:

Date Approved: _____ Signature, Department Chairperson: _____

Date Approved: _____ Signature, Department Chairperson: _____

I have reviewed the attached material/proposal

Signature, Department Chairperson: _____



TO: Fall 2020 Curriculum Committee

FROM: Department of Mathematics & Computer Science

DATE: 08/01/2020

RE: New Course: College Algebra for STEM Majors (MAT 09B0)

The Department of Mathematics & Computer Science is proposing to add College Algebra for STEM Majors (MAT 09B0), as follows:

ADD:
MAT 09B0- College Algebra for STEM Majors

Rationale for Change:

The proposed course represents a new pedagogical approach to College Algebra, using a lab-based model and more supported interaction for preparing prospective STEM students for success in precalculus.

Students will work in a laboratory setting with an instructor and will be provided hands-on, personalized guidance in the development and fine-tuning of algebraic skills. This approach will facilitate success for students who would not otherwise succeed in College Algebra.

Additionally, this course aligns with the upcoming CUNY transition, effective Fall 2022, to remove courses that follow Elementary Algebra – at Kingsborough MAT R300 – Elementary Algebra II - but precede the first-level Pathways MQR course – at Kingsborough MAT 900 – College Algebra.

Currently students who are Math Proficient enroll as follows:

MAT R300 – Elementary Algebra II **to** MAT 900 – College Algebra **to** MAT 1400 Pre-Calculus.

The new course will allow student to proceed to MAT 1400 a semester earlier:

MAT 9B0 **to** MAT 1400

This course also meets the concerns outlined by CUNY for Algebra Proficiency Standard for Students Pursuing STEM Degrees –which “ allows for up to two additional hours of corequisite support in college algebra to develop a strong foundation for further STEM-focuses algebra sequences.”

MAT 900 – College Algebra, is 3 credits, 4 hours. The proposed course, MAT 9B0 – College Algebra for STEM Majors, is 3 credits, 0 hours lecture, 6 hours lab. This aligns with CUNY’s trajectory as well as Middle States Commission on Higher Education (MCHE) Guidelines for College Credits Assigned for Instructional Hours.

Once the course is in place, the department plans to conduct an analysis of student success, including such factors as grade distribution and particularly Exit Exam performance in MAT 9B as compared/contrasted with those of MAT 9, and assessment of both global and particular essential skills needed for STEM students going forward. One interesting potential avenue for such study will be the relative emphases on specific skill sets which have particular value for different avenues of study within STEM (health sciences vs engineering, for example) with possible future potential for customization within these laboratory-based sections.

The department is hopeful that this new approach will provide much-enhanced student success for our STEM students.

Adjustments to the following STEM degrees are submitted to reflect MAT 9B0 – College Algebra for STEM Majors, under Required Core: Mathematical and Quantitative Reasoning (MQR).

Department of Biological Sciences:

- A.S. Biology
- A.S. Biotechnology

Department of Mathematics and Computer Science:

- A.A.S. Computer Information Systems
- A.S. Computer Science
- A.S. Mathematics

Department of Physical Sciences

- A.S. Chemistry
- A.S. Earth and Planetary Sciences
- A.S. Engineering Science
- A.S. Physics
- A.S. Science for Forensics

Add/Delete/Change	A.A.S. COMPUTER INFORMATION SYSTEMS	
	Department: Mathematics and Computer Sciences	
	HEGIS: 5101.00	
	PROGRAM CODE: 01055	
	CUNY CORE	CREDITS
	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.	
	ENG 1200 - Composition I	3
	ENG 2400 - Composition II	3
	Mathematical and Quantitative Reasoning:	
	MAT 1400 – Analytic Geometry and Pre-Calculus Mathematics* or	3
	MAT/BA 2200 – Business Statistics*	4
	Life and Physical Sciences	3
	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.	
	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	
	B. U.S. Experience In Its Diversity	
	C. Creative Expression	
	D. Individual & Society	
	E. Scientific World*:	
	MAT 900 - College Algebra or ^	3
ADD:	MAT 9B0 - College Algebra for STEM Majors^	3
	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 (CP 6200)	4
	CIS 2100 - Introduction to Webpage Development (CIS 2100)	4
	CIS 2200 - HTML Authoring and JavaScript (CIS 2200)	4
	CIS 3200 - Advanced Database Programming (CIS 3200)	4
	CIS 4500 - Network Server Administration (CIS 4500)	4

	ELECTIVES: 0 -2 credits sufficient to total 60 credits for the degree.	
	TOTAL:	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.	
CHANGE:	^ Depending on Math placement, students may be required to complete MAT 900, or MAT 9B0, and MAT 1400.	

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