

## Mathematics (A.S. Degree)

## RECOMMENDED 2 YEAR ACADEMIC PLAN

### REMEDIAL SEQUENCE (if required)

<input type="checkbox"/> ESL 1 (8) ▶▶	<input type="checkbox"/> ESL 2 (6) ▶▶	<input type="checkbox"/> ESL 3 (6) ▶▶	<input type="checkbox"/> ENG 9 (4)
<input type="checkbox"/> ENG 1 (4) ▶▶	<input type="checkbox"/> ENG 2 (4)		
<input type="checkbox"/> RDL 1 (4) ▶▶	<input type="checkbox"/> RDL 2 (6)		
<input type="checkbox"/> MTH 1 (4) ▶▶	<input type="checkbox"/> MTH 5 (6) ▶▶	<input type="checkbox"/> MTH 6 (6)	
<input type="checkbox"/> CHM 2 (4)			

### GRADUATION REQUIREMENTS

<input type="checkbox"/> CAT-R	<input type="checkbox"/> CAT-W	<input type="checkbox"/> CAT-M	<input type="checkbox"/> GPA > 2.0
<input type="checkbox"/> Writing Intensive I	<input type="checkbox"/> Writing Intensive II		

### PATHWAYS REQUIRED CORE (course list available online)

<input type="checkbox"/> A	English Composition ENG 110/111 and ENG 112/113/114/115/116	6
<input type="checkbox"/> B	Mathematical and Quantitative Reasoning MTH 31	4

### PATHWAYS FLEXIBLE CORE (course list available online)

<input type="checkbox"/> A	World Cultures and Global Issues	3
<input type="checkbox"/> B	US Experience in its Diversity	3
<input type="checkbox"/> C	Creative Expression	3
<input type="checkbox"/> D	Individual and Society	3
<input type="checkbox"/> A-E	Additional Flexible Core	3

### PATHWAYS Science Selection

<input type="checkbox"/> Required Core C	Life and Physical Sci. - SCIENCE I	4
<input type="checkbox"/> Flexible Core E	Scientific World - SCIENCE II	4

Pathways Total: 33

<sup>1</sup> MTH 30 (Pre-Calculus) is a pre-requisite for MTH 31. Students requiring MTH 30 must use (4) free elective credits for this purpose.

<sup>1</sup> Mathematics must be taken each semester or graduation will be delayed.

<sup>2</sup> Lab Science I & II must form a sequence, e.g., BIO 11 & BIO 12.

PHY 31 and PHY 32 have co-requisites of MTH 31 and MTH 32, respectively.

<sup>2</sup> This program has been given a waiver to require its students to take MTH 31 to fulfill Required Area B; BIO 11 or CHM 11 or PHY 11 or PHY 31 to fulfill Required Area C; and BIO 12 or CHM 12 or PHY 12 or PHY 32 to fulfill Flexible Area E. If students transferring into this program complete different courses in these areas, they will be certified as having completed the Common Core requirements, but it may not be possible for them to finish their degree within the regular number (60) of credits.

<sup>3</sup> Students must complete five Flexible Core courses, one from each of the four Flexible Core areas (A-D) and an additional course from any of the Flexible Core areas A-E.

<sup>4</sup> CSI 35 has as prerequisite CSI 30, for which a student will need to use free elective credits or sixth Flexible Core course (Area E). If a student chooses to take a different course for his/her sixth Flexible Core course, then this option is only available if the student does not need to take MTH 30 (Pre-Calculus).

Note: Students are encouraged to begin transfer planning early in their academic careers. Please visit the Transfer Planning web site for the timeline as well as information on articulation and transfer:

<http://www.bcc.cuny.edu/TransferCounseling/>

### SEMESTER I

		Credits
<input type="checkbox"/> ENG 110 OR ENG 111	Fundamentals of Composition and Rhetoric OR Composition and Rhetoric I (Required Core A)	3
<input type="checkbox"/> MTH 31 <sup>1</sup>	Analytical Geometry & Calculus I (Required Core B)	4
<input type="checkbox"/> BIO 11 OR CHM 11 OR PHY 11 OR PHY 31 <sup>2</sup>	SCIENCE I (Required Core C)	4
<input type="checkbox"/> Flexible Core A-D <sup>3</sup>	Select one course from Flexible Core A-D <sup>3</sup>	3
<b>Subtotal: (hours) credits:</b>		<b>14</b>

### SEMESTER II

<input type="checkbox"/> ENG 112 OR ENG 113 OR ENG 114 OR ENG 115 OR ENG 116	Composition and Rhetoric II OR Writing About Literature OR Written Composition and Prose Fiction OR Written Composition and Drama OR Written Composition and Poetry (Required Core A)	3
<input type="checkbox"/> MTH 32	Analytic Geometry & Calculus II (Major Requirement)	5
<input type="checkbox"/> BIO 12 OR CHM 12 OR PHY 12 OR PHY 32 <sup>2</sup>	SCIENCE II (Flexible Core E)	4
<input type="checkbox"/> Flexible Core A-D <sup>3</sup>	Select one course from Flexible Core A-D <sup>3</sup>	3
<b>Subtotal: (hours) credits:</b>		<b>15</b>

### SEMESTER III

<input type="checkbox"/> MTH 33	Analytic Geometry & Calculus III (Major Requirement)	5
<input type="checkbox"/> MTH 42	Linear Algebra (Major Requirement)	4
<input type="checkbox"/> Flexible Core A-D <sup>3</sup>	Select one course from Flexible Core A-D <sup>3</sup>	3
<input type="checkbox"/> Flexible Core A-D <sup>3</sup>	Select one course from Flexible Core A-D <sup>3</sup>	3
<b>Subtotal: (hours) credits:</b>		<b>15</b>

### SEMESTER IV

<b>Two of the following courses:</b>	<b>(Major Requirements)</b>	
<input type="checkbox"/> MTH 34	Differential Equations & Selected Topics in Advanced Calculus	4
<input type="checkbox"/> MTH 35	Selected Topics in Advanced Calculus and Linear Algebra	4
<input type="checkbox"/> MTH 44	Vector Analysis	4
<input type="checkbox"/> MTH 46	Abstract Algebra	4
<input type="checkbox"/> MTH 48	Advanced Calculus	4
<input type="checkbox"/> CSI 35 <sup>4</sup>	Discrete Mathematics II	3
Total:		7-8
<input type="checkbox"/> Additional Flexible Core A-E <sup>3</sup>	Select <b>ONE</b> course from any Flexible Core A-E <sup>3</sup>	3
<input type="checkbox"/> Free Elective <sup>1</sup>	Free Elective to complete 60 credits.	5-6
<b>Subtotal: (hours) credits:</b>		<b>16</b>

**TOTAL CREDITS: 60**