

# PATHWAYS

## Mathematics (A.S. Degree)

### FALL 2020-SPRING 2021

#### 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)
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<input type="checkbox"/> ENG 11 (4) ▶▶	<input type="checkbox"/> ENG 2 (4)
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<input type="checkbox"/> RDL 1 <sup>1</sup> (4) ▶▶	<input type="checkbox"/> RDL 2 (6)
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<input type="checkbox"/> MTH 1 (4) ▶▶	<input type="checkbox"/> MTH 5 (6) ▶▶	<input type="checkbox"/> MTH 6 (6)
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<input type="checkbox"/> CHM 2 (4)
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#### GRADUATION REQUIREMENTS

<input type="checkbox"/> GPA ≥ 2.0	<input type="checkbox"/> Writing Intensive 1	<input type="checkbox"/> Writing Intensive 2
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#### FRESHMAN SEMINAR

<input type="checkbox"/> FYS 11
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<sup>1</sup>Students with prior ENG 1/RDL 1 placements (or English Proficiency Index < 50) will now take ENG 4 or RDL 4. Passing ENG 4 or RDL 4 will allow them to register for ENG 110.

<sup>2</sup>MTH 30 is a pre-requisite for MTH 31. Students requiring MTH 30 must use free elective credits for this purpose

<sup>3</sup>Lab Science I & II must form a sequence, e.g., BIO 11 & BIO 12.

<sup>4</sup>See Degree map at: <http://www.bcc.cuny.edu/academics/academic-advising/degree-maps/> for semester-by-semester sequence.

<sup>5</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).

#### Notes:

- The 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 course 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.
- 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/>

#### REQUIRED COMMON CORE

<input type="checkbox"/> A	English Composition ENG 110 <sup>1</sup> OR ENG 111; and ENG 112 OR ENG 113 OR ENG 114 OR ENG 115 OR ENG 116	6
<input type="checkbox"/> B	Mathematical and Quantitative Reasoning MTH 31 Calculus & Analytic Geometry I <sup>2</sup>	4
<input type="checkbox"/> C	Life and Physical Sciences <sup>3</sup> Lab Science I BIO 11 or CHM 11 or PHY 11 or PHY 31	4
<b>Subtotal:</b>		<b>14</b>

#### FLEXIBLE COMMON CORE (Course list at: <http://www.bcc.cuny.edu/pathways/?p=Flexible-Common-Core>)

Students can complete no more than two courses from any one discipline or interdisciplinary field.		
<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"/> E	Scientific World <sup>2</sup> Lab Science II BIO 12 or CHM 12 or PHY 12 or PHY 32	4
<input type="checkbox"/>	Select an additional course from Flexible Core Area A-E.	3
<b>Subtotal:</b>		<b>19</b>

#### MAJOR REQUIREMENTS<sup>4</sup>

<input type="checkbox"/> MTH 32	Analytic Geometry & Calculus II	5
<input type="checkbox"/> MTH 33	Analytic Geometry & Calculus III	5
<input type="checkbox"/> MTH 42	Linear Algebra	4
<b>Select two courses from the following (MTH OR CSI):</b>		
<input type="checkbox"/> MTH 34	Differential Equations & Selected Topics in Advanced Calculus	7-8
<input type="checkbox"/> MTH 35	Selected Topics in Advanced Calculus and Linear Algebra	
<input type="checkbox"/> MTH 44	Vector Analysis	
<input type="checkbox"/> MTH 46	Abstract Algebra	
<input type="checkbox"/> MTH 48	Advanced Calculus	
<input type="checkbox"/> CSI 35 <sup>5</sup>	Discrete Mathematics II	
<input type="checkbox"/> ELECTIVES	MTH 30 <sup>2</sup> and/or Free Electives	1-6
<b>Subtotal:</b>		<b>27</b>
<b>TOTAL:</b>		<b>60</b>