

# Applied Mathematics BA Computer Science Track

**12** Required Core Credits

**18** Flexible Core Credits

**12** College Option Credits

**57** Major Credits

**21** Elective Credits

This 4-year academic plan is designed to help freshmen entering Queens College in Fall 2023. Our 4-year academic plans are illustrative examples of integrated degree requirements and course sequencing for each of the College's programs of study which are designed to ensure degree completion in a timely manner. Students are advised to meet with professional and faculty advisors to tailor their degree maps to their individual interests (academic and career goals), as well as other considerations including course offerings and the incorporation of winter and summer sessions. Course pre-requisite/s and co-requisite/s are strictly enforced, as are entrance and maintenance criteria (if applicable) for the successful completion of the degree.

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## Freshman

### FALL

English Composition I (EC1)	3 credits
MATH 122 (MQR)	4 credits
Pre-calculus	
Life & Physical Science (LPS)	4 credits
World Cultures & Global Issues (WCGI)	3 credits

**Fall total credits 14 credits**

### SPRING

English Composition II (EC2)	3 credits
MATH 151	4 credits
Calculus I	
CSCI 111 (or MATH 250)	3 credits
Introduction to Algorithmic Problem Solving	
US Experience in its diversity (USED)	3 credits
Creative expression (CE)	3 credits

**Spring total credits 16 credits**

## Sophomore

### FALL

MATH 152	4 credits
Calculus II	
MATH 231	4 credits
Linear Algebra	
Computer Science Elective $\mu$ (in consultation with Math Dept. advisor)	3 credits
Individual and Society (IS)	3 credits

**Fall total credits 14 credits**

### SPRING

MATH 201	4 credits
Multi-Variable Calculus	
MATH 241	3 credits
Probability & Statistics	
Computer Science Elective $\mu$ (in consultation with Math Dept. advisor)	3 credits
Scientific World (SW)	3 credits
An Additional Flexible Core	3 credits

**Spring total credits 16 credits**

General Education requirements may be taken in any order if the pre-requisite requirement(s) is/are satisfied.

$\text{¥}$  The following sequences of classes are considered the equivalents of MATH 151 and MATH 152: MATH 141, 142, and 143; MATH 131, 132, and 143; MATH 151, 142, and 143; MATH 157 and 158.

$\text{€}$  Students who are majoring in mathematics may not enroll in MATH 115, 122, 131, 132, 141, 142, 143, 151, 152, 201, or 231 if they have withdrawn from or received a failing grade (F, FIN, W, WD, WN, WU) in that same course three times. Students may not declare a major in mathematics if they have withdrawn from or received a failing grade three times in any one of MATH 115, 122, 131, 132, 141, 142, 143, 151, 152, 201, or 231.

$\mu$  Three computer science courses numbered CSCI 211 or higher that each carry 3 or more credits.

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## Junior

### FALL

MATH 202 (or 207) Advanced Calculus	4 credits
Math Elective® (in consultation with Math Dept. advisor)	3 credits
Computer Science Elective <sub>μ</sub> (in consultation with Math Dept. advisor)	3 credits
College Option Literature (LIT+W) With Writing Intensive Unit*	3 credits
College Option Science (SCI)	3 credits

**Fall total credits 16 credits**

### SPRING

Math Elective® (in consultation with Math Dept. advisor)	3 credits
Math Elective® (in consultation with Math Dept. advisor)	3 credits
Foreign Language (LANG)	4 credits
One Writing Intensive Unit (W)	3 credits
An Additional College Core	3 credits

**Spring total credits 16 credits**

## Senior

### FALL

Math Elective® (in consultation with Math Dept. advisor)	3 credits
Math Elective® (in consultation with Math Dept. advisor)	3 credits
An Additional College Core	3 credits
Second major, minor, or general electives	6 credits

**Fall total credits 15 credits**

### SPRING

Math Elective® (in consultation with Math Dept. advisor)	3 credits
Second major, minor, or general electives	12 credits

**Spring total credits 15 credits**

® Six elective MATH courses at the 200-, 300-, 600-, or 700-level (not including MATH 205, 218, 271, 272, or 385Wf).

f Not open to students who are taking or who have received credit for MATH 585.

\* If a Literature course is taken with a W, it will count towards Literature and one Writing Intensive Unit.

• At least eighteen credits of the MATH required and elective courses must be taken at Queens College.

\*\*General Electives: Students may complete general electives by taking courses in (most) department/s or programs they choose; however, depending on the course/program, students may need department permission and/or prerequisite course/s. Electives may be used to supplement the chosen major (an English major may want to take a course in French or Italian literature) or to fulfill interest in a different area (a Music major may be interested in the physics of sound). Students are encouraged to use available electives to complete a dual major, minor, pre-requisites for graduate or professional school, or complete and internship, experiential learning and/or study abroad. Students are encouraged to use their available general electives wisely and focus on coursework that will assist them personally, academically and professionally.