

Mathematics BA Pure Math Option

12 Required Core Credits

18 Flexible Core Credits

12 College Option Credits

56 Major Credits

22 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.

Mathematics BA

Pure Math Option

Freshman

FALL

English Composition I (EC1)	3 credits
MATH 122 (MQR)	4 credits
Pre-calculus	
World Cultures & Global Issues (WCGI)	3 credits
US Experience in Its Diversity (USED)	3 credits
Creative Expression (CE)	3 credits

Fall total credits 16 credits

SPRING

English Composition II (EC2)	3 credits
MATH 151¥€ (or equivalent)	4 credits
Calculus I	
Individual and Society (IS)	3 credits
Scientific World (SW)	3 credits
An Additional Flexible Core	3 credits

Spring total credits 16 credits

Sophomore

FALL

MATH 152¥€ (or equivalent)	4 credits
Calculus II	
MATH 231€	4 credits
Linear Algebra	
College Option Literature (LIT+W)	3 credits
With Writing Intensive Unit*	
Foreign Language (LANG)	4 credits

Fall total credits 15 credits

SPRING

MATH 201€	4 credits
Multi-Variable Calculus	
PHYS 1454&1451 (LPS)	5 credits
Principle of Physics I	
One Writing Intensive Unit (W)	3 credits
An Additional College Core	3 credits

Spring total credits 15 credits

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

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

¥ 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.

€ 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majoring in mathematics may not enroll in MATH 115, 122, 131, 132, 141, 142, 143, 151, 152, 201, or 231 if they have withdrawn from or received a failing grade (F, FIN, W, WD, WN, WU) in that same course three times.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.

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Junior

FALL

MATH 202 (or 207) Advanced Calculus	4 credits
PHYS 1464&1461 (SCI) Principles of Physics II	5 credits
Math Elective® (in consultation with Math Dept. advisor)	3 credits
Math Elective® (in consultation with Math Dept. advisor)	3 credits

Fall total credits 15 credits

SPRING

MATH 310 Real Analysis	3 credits
MATH 301 (or 601) Abstract Algebra I Introduction to Algebraic Structures	4 credits
Math Elective® (in consultation with Math Dept. advisor)	3 credits
Math Elective® (in consultation with Math Dept. advisor)	3 credits
Second major, minor, or general electives	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
Second major, minor, or general electives	9 credits

Fall total credits 15 credits

SPRING

Math Elective® (in consultation with Math Dept. advisor)	3 credits
Math Elective® (in consultation with Math Dept. advisor)	3 credits
Second major, minor, or general electives	9 credits

Spring total credits 15 credits

® Eight elective MATH courses at the 200-, 300-, 600-, or 700-level (not including MATH 205, 218, 255, 271, 272, or 385). Up to two math-intensive courses outside the math department may be taken to fulfill elective requirements. Courses other than CSCI 111, CSCI 320, CSCI 352, PHYS 243, and PHYS 365 must be approved by the department.

It is recommended that all pure math majors take computational courses such as MATH 250 or CSCI 111. Students who aim for Honors in Mathematics or who intend to continue their studies toward an eventual Master's or PhD degree in Mathematics are encouraged to take the more advanced and theoretical 300-, 600-, and 700-level courses.

At least eighteen credits of these 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.