

Mathematics Secondary Education 7-12 BA

12 Required Core Credits

18 Flexible Core Credits

12 College Option Credits

53+27 (SEYS) Major Credits

0 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 Secondary Education 7-12 BA

Freshman

FALL

English Composition I (EC1)	3 credits
World Cultures & Global Issues (WCGI)	3 credits
US Experience in Its Diversity (USED)	3 credits
Creative Expression (CE)	3 credits
Foreign Language (LANG)	4 credits

Fall total credits 16 credits

SPRING

English Composition II (EC2)	3 credits
MATH 151*€ (MQR)	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*€	4 credits
Calculus II	
MATH 220	3 credits
Discrete Mathematics	
SEYS 201W (W)	3 credits
Historical, Social, and Philosophical Found of Edu.	
College Option Literature (LIT)	3 credits
An Additional College Core	3 credits

Fall total credits 16 credits

SPRING

MATH 241	3 credits
Probability & Mathematical Statistics	
MATH 201€	4 credits
Multivariate Calculus	
Methods of Mathematical Statistics	
CSCI 111 or 112	3 credits
Intro to Algorithmic Problem Solving	
SEYS 221	3 credits
Develop. & Learning in Mid. Childhood & Adole.	
Electives	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.

* MATH 151 & 152 OR MATH 141, 142, & 143

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majoring in mathematics may not enroll in MATH 115, 122, 131, 132, 141, 142, 143, 151, 152, 201, or 231 if they have withdrawn from or received a failing grade (F, FIN, W, WD, WN, WU) in that same course three times. Students may not declare a major in mathematics if they have withdrawn from or received a failing grade three times in any one of MATH 115, 122, 131, 132, 141, 142, 143, 151, 152, 201, or 231.

***Three or four additional courses as follows:

Three additional courses chosen from Lists X and Y below, of which at least two must be from List X, or four additional courses chosen from Lists X and Y below, of which at least one must be from List X. At least fifteen credits of these required and elective courses must be taken at Queens College.

List X: MATH 305 (or 605), 310, 317 (or 617), 318 (or 618), 334 (or 634), 609, and 626. MATH 310 is recommended for those who expect to teach calculus. Also especially recommended are MATH 305, 317, and 318 or their graduate equivalents.

List Y: MATH 202, 223, 232, 242, 245, 247, 248, 250, 255, 320 and all 500- and 600-level courses not already used to satisfy the above requirements. MATH 202 is usually required for entry into master's degree programs in mathematics.

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Junior

FALL

MATH 231 or 237 (select one) Linear Algebra	4 credits
MATH 205 (or 505) Problem Solving	3 credits
Either one CSCI or one PHYS course from: One of CSCI 211, CSCI 212, PHYS 121**, or PHYS 145**	3/5 credits
ECPSE 350	3 credits
Foundation of Special Education College Option Science (SCI)	3 credits

Fall total credits 16/18 credits

SPRING

SEYS 340 Lang. Literacy & Cult. in Education	3 credits
MATH 385W (W) Mathematic Found. of the Secondary School Curriculum	4 credits
First additional Math course***	3 credits
Second additional Math course***	3 credits
MATH 301 or 601 Abstract Algebra I	4 credits

Spring total credits 17 credits

Senior

FALL

MATH 218 (or 518) College Geometry	3 credits
SEYS 350 Cognition, Tech., and Instruct. for Diverse Learners	3 credits
SEYS 361 Methods of Teaching Mathematics in & High School	3 credits
SEYS 371.2 Initial Clinical Experience in Mathematics	3 credits
Third additional Math course***	3 credits

Fall total credits 15 credits

SPRING

SEYS 371.4 Students Teaching Mathematics in Middle or High School	3 credits
SEYS 381W (W) Curriculum & Assessment in Teach. Math Life & Physical Science (LPS) (if needed)	3 credits
Fourth additional Math course (if needed)***	3 credits
Electives	3 credits

Spring total credits 16 credits

- At least fifteen credits of these required and elective courses must be taken at Queens College.

** PHYS 1214+1211 & PHYS 1454+1451 fulfill the General Education, Required Core, Life & Physical Science (LPS) requirement or the College Option Science (SCI) requirement.

***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.