

Chemistry BS

FOUR-YEAR ACADEMIC PLAN

12 Required Core Credits

18 Flexible Core Credits

12 College Option Credits

77 Major Credits

1 Elective Credits

This 4-year academic plan is for freshmen entering Queens College in Fall 2025.

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
Precalculus	
CHEM 1134 & 1131 (LPS)	5 credits
General Chemistry I	
World Cultures & Global Issues (WCGI)	3 credits

Fall total credits**15 credits**

SPRING

English Composition II (EC2)	3 credits
MATH 151¥	4 credits
Calculus I	
CHEM 1144 & 1141 (SW)	5 credits
General Chemistry II	
U.S Experience in its Diversity (USED)	3 credits

Spring total credits**15 credits**

Sophomore

FALL

CHEM 2514 & 2511 (SCI)	5 credits
Organic Chemistry I	
MATH 152¥	4 credits
Calculus II	
Creative Expression (CE)	3 credits
Individual and Society (IS)	3 credits

Fall total credits**15 credits**

SPRING

CHEM 2524 & 2521	5 credits
Organic Chemistry II	
BIOL 105 (SCI)	4 credits
General Biology I	
College Option Language (LANG)	4 credits
General 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.

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Junior

FALL

CHEM 3313 & 3311W	4 credits
Inorganic Chemistry	
CHEM 211	4 credits
Chemical Thermodynamics and Kinetics	
PHYS 1454 & 1451 (LPS, SW, SCI)	5 credits
Principles of Physics I	
General Electives	3 credits

Fall total credits

16 credits

SPRING

CHEM 212	4 credits
Quantum Chemistry and Spectroscopy	
PHYS 1464 & 1461 (LPS, SW, SCI)	5 credits
Principles of Physics II	
CHEM 291 or chem 391.1	1 credits
Research in Chemistry and Biochemistry	
College Option Literature (LIT)	3 credits
General electives	3 credits

Spring total credits

16 credits

Senior

FALL

CHEM 3413 and 3411	4 credits
Instrumental Methods	
CHEM 371	4 credits
Biochemistry I	
One Advanced Course from the following:	4 credits
CHEM 351, 352, 372, 378, OR 385	
General electives	3 credits

Fall total credits

15 credits

SPRING

CHEM 395W Senior Thesis	3 credits
Advanced lab Course from the following:	3 credits
CHEM 376, CHEM 387, or CHEM 388	
CHEM 391.1-3	
Research in Chemistry and Biochemistry	
General electives	9 credits

Spring total credits

15 credits

*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.

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

¥ Students who fail or withdraw from this course multiple times may be prohibited from majoring in the sciences or mathematics; see your department for questions.