

# Physics BS

**12**

Required Core Credits

**18**

Flexible Core Credits

**12**

College Option Credits

**69**

Major Credits

**9**

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 151¥ (MQR)	4 credits
Calculus I	
World Cultures & Global Issues (WCGI)	3 credits
U.S Experience in its Diversity (USED)	3 credits
Creative Expression (CE)	3 credits

**Fall total credits 16 credits**

### SPRING

English Composition II (EC2)	3 credits
PHYS 1454 & 1451 (LPS)	5 credits
Principles of Physics I	
MATH 152¥	4 credits
Calculus II	
Individual and Society (IS)	3 credits

**Spring total credits 15 credits**

## Sophomore

### FALL

PHYS 1464 & 1461 (SCI)	5 credits
Principles of Physics II	
MATH 201¥	4 credits
Calculus III	
An Additional Flexible Core	3 credits
One Writing Intensive Unit (W)	3 credits

**Fall total credits 15 credits**

### SPRING

PHYS 234	3 credits
Mathematical Methods II	
PHYS 235	2 credits
Classical Physics LAB	
Scientific World (SW)	3 credits
College Option Literature (LIT + W)	3 credits
With Writing Intensive Unit*	
College Option Language (LANG)	4 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.

¥ 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.

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## Junior

### FALL

PHYS 233 Mathematical Methods I	3 credits
PHYS 260 Modern Physics	4 credits
PHYS 243 Thermodynamics	4 credits
PHYS 222 Optics	3 credits

**Fall total credits 14 credits**

### SPRING

PHYS 237 Mechanics	4 credits
Science/Math Elective (Department approval needed)	3 credits
An Additional College Core General electives**	3 credits 6 credits

**Spring total credits 16 credits**

## Senior

### FALL

PHYS 310 Electromagnetism I	4 credits
PHYS 365 Quantum Mechanics	4 credits
PHYS 377 Modern Physics LAB	2 credits
Physics Elective 200 or above	3 credits
General electives	3 credits

**Fall total credits 16 credits**

### SPRING

PHYS 311 Electromagnetism II	4 credits
PHYS 345 Solid State Physics	4 credits
General electives	6 credits

**Spring total credits 14 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.