

QUEENS COLLEGE

# Computer Science BA

FOUR-YEAR ACADEMIC PLAN

12

Required Core Credits

18

Flexible Core Credits

12

College Option Credits

66/67

Major Credits

12/11

Elective Credits

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120

Total

This 4-year academic plan is designed to help freshmen entering Queens College in Fall 2019 plan their academic career and ensure that they complete all requirements for graduation in a timely fashion. All other students should consult their academic and department advisors to chart their own 4-year academic plans. Students should note that course pre-requisite/s and co-requisite/s are strictly enforced and they should regularly meet with their department advisors to identify their specific major/minor requirements and entrance and maintenance criteria (if applicable) for successful completion of their degree.

# Computer Science BA

## FOUR-YEAR ACADEMIC PLAN

### Freshman

#### FALL

English Composition I (EC1)	3 credits
World Cultures & Global Issues (WCGI)	3 credits
U.S Experience in its Diversity (USED)	3 credits
Creative Expression (CE)	3 credits
MATH 151 (MQR)	4 credits
Calculus I	

**Fall total credits** **16 credits**

#### SPRING

English Composition II (EC2)	3 credits
Individual and Society (IS)	3 credits
An Additional Flexible Core	3 credits
College Option Literature (LIT+W) With Writing Intensive Unit*	3 credits
MATH 152	4 credits
Calculus II	

**Spring total credits** **16 credits**

### Sophomore

#### FALL

CSCI 111	3 credits
Introduction to Algorithmic Problem Solving	
MATH 120	3 credits
Discrete Mathematics	
Scientific World (SW)	3 credits
An Additional College Core	3 credits
College Option Language (LANG)	4 credits

**Fall total credits** **16 credits**

#### SPRING

CSCI 211	3 credits
OOP in C++	
CSCI 212	3 credits
OOP in Java	
CSCI 220	3 credits
Discrete Structures	
CSCI 240	3 credits
Computer Organization and Assembly Language	
One Writing Intensive Unit (W)	3 credits

**Spring total credits** **15 credits**

Students may either focus on Gen Ed requirements during freshman year, or start CSCI-BA sooner by spreading courses for the major over 4 years in accordance to the prerequisite structure depicted in <http://www.cs.qc.edu/undergrad/BA.pdf>

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

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

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### Junior

#### FALL

CSCI 313	3 credits
Data Structures	
CSCI 320	3 credits
Theory of Computation	
CSCI 343	3 credits
Computer Architecture	
MATH 241	3 credits
Probability & Statistics	
MATH 231 or 237	4 credits
Linear Algebra	

**Fall total credits 16 credits**

#### SPRING

CSCI 323	3 credits
Design & Analysis of Algorithms	
CSCI 331	3 credits
Database Systems	
CSCI 340	3 credits
Operating Systems	
CSCI 316	3 credits
Principles of Programming Languages	
First Computer Science Elective**	3 credits

**Spring total credits 15 credits**

### Senior

#### FALL

CSCI 355	3 credits
Internet & Web Technologies	
CSCI 370	3 credits
Software Engineering	
Second Computer Science Elective**	3 credits
Life & Physical Science (LPS)	4 credits
General electives***	2 credits

**Fall total credits 15 credits**

#### SPRING

College Option Science (SCI)	3 credits
General electives***	12 credits

**Spring total credits 15 credits**

\*\*6 credits of computer science courses numbered CSCI 300-396. One course from the following list may be used: BIOL 330; MATH 202, 223, 224, 232, 242, 245, 247, 248, 317, 333, 337, 609, 613, 619, 621, 623, 624, 625, 626, 633, 634, 635, or 636; PHYS 225, 227, 265, or 311. No more than 3 credits of CSCI 390 through 395 may be used as part of the major without the approval of the department's Honors and Awards Committee.

\*\*\*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.