

Data Science & Statistics BA

FOUR-YEAR ACADEMIC PLAN

12 Required Core Credits

18 Flexible Core Credits

12 College Option Credits

54 Major Credits

24 Elective Credits

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.

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Freshman

All students must have completed MATH 151 and MATH 152 or the equivalents. (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)

FALL

English Composition I (EC1)	3 credits
World Cultures & Global Issues (WCGI)	3 credits
Life & Physical Science (LPS)	3 credits
CSCI 111 (MQR)	3 credits
Introduction to Algorithmic Problem Solving	
SOC 101 (IS)	3 credits
Introduction to Sociology	

Fall total credits

15 credits

SPRING

English Composition II (EC2)	3 credits
CSCI 212 (or 211)	3 credits
Object Oriented Programman in Java	
Creative Expression (CE)	3 credits
Scientific World (SW)	3 credits
Additional Flexible Core	3 credits

Spring total credits

15 credits

Sophomore

FALL

MATH 241 (or 611)	3 credits
Introduction to Probability and Mathematical Statistics	
First Major Elective, Selected from List A*	3 credits
College Option Literature (LIT) with	
Writing Unit (W)	3 credits
Second Major Elective, Selected from List A*	3 credits
General Electives***	3 credits

Fall total credits

15 credits

SPRING

MATH 231 (or 237)	4 credits
Linear Algebra I	
ECON 382	3 credits
Introduction to Econometrics	
Third Major Elective, Selected from List A*	3 credits
Additional College Core	3 credits
General Electives***	3 credits

Spring total credits

16 credits

*List A: SOC 235, SOC 333, CSCI 48, CSCI 211, CSCI 212, CSCI 220, CSCI 313, BUS 386, BIOL 330, PSYCH 323 or one relevant course not on this list (upon prior approval by your department advisor)

**List B: MATH 202, 220, 223, 232, or any MATH course 310 and above

Note: If SOC 333 is chosen from List A, it is recommended that CSCI 111 be taken before SOC 333.

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Junior

FALL

MATH 201	4 credits
Multivariable Calculus	
ECON 387	3 credits
Advanced Econometrics	
Foreign Language (LANG)	3 credits
US Experience in its Diversity (USED)	3 credits
General electives***	3 credits

Fall total credits

16 credits

SPRING

MATH 341	3 credits
Bayesian Modeling	
MATH 368 (or 621)	3 credits
Advanced Probability	
SOC 205 (or BIOL 230)	4 credits
Social Statistics I	
One Writing Intensive Unit (W)	3 credits
General Electives***	3 credits

Spring total credits

16 credits

Senior

FALL

MATH 369 (or 633)	3 credits
Advanced Statistics	
MATH 310 (or 320)	3 credits
Elementary Real Analysis	
College Option Science (SCI)	3 credits
General Electives***	6 credits

Fall total credits

15 credits

SPRING

First Major Elective, Selected from List B**	3 credits
Second Major Elective, Selected from List B**	3 credits
General Electives***	6 credits

Spring total credits

12 credits

The University has general education requirements. There are many general education courses that involve data science concepts; these can be beneficial for a student choosing the Data Science and Statistics option. The following courses are recommended:

LCD 101 (SW/LANG/SCI); LCD 102 (LANG); PSCI 100 (USED); PSYCH 101 (SW/SCI); PSYCH 213W (LPS/SW/SCI); SOC 101 (IS)

Note that the LCD 101 AND LCD 102 are highly recommended for the student who wishes to learn natural language processing, an important aspect of modern data science.

***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 an 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.