B.S. IN MATHEMATICS AND DATA SCIENCE

Code	Title	Credits
Major in Mathematics and Data Science (B.S.)		
COS 111	Introduction to Programming	4
COS 211	Data Structures	4
COS 277	Software Development Fundamentals	4
COS 313	Database Systems	2
COS 334	Data Mining and Machine Learning	3
MAT 124M	Calculus 1 [1]	4
MAT 125	Calculus 2	4
MAT 211	Linear Algebra	4
MAT 222	Differential Equations [2]	4
MAT 223	Multivariable Calculus	4
MAT 242	Introduction to Proofs	2
MAT 299	Careers in Mathematics and Computer Science Seminar	0
MAT 330	Probability and Statistics	3
MAT 331	Advanced Probability and Statistics	3
MAT 410	Abstract Algebra	4
MAT 422	Real Analysis	4
MAT 441	Combinatorics and Graph Theory	4
MAT 499	Senior Seminar	2
BUS 317	Business Analytics	4
Choose one of the following courses:		3-4
BUS 416	Machine Learning and Artificial Intelligence for Business [3]	
MAT 376	Operations Research	
Electives from 300-level or above MAT courses or 200-level or above COS courses		2

Code	Title	Credits
Major		68-69
General Education [*]		44-52
Electives		2-9
Total Credits		**122**

[1]   Placement at MAT 124M on the Math and Computer Science department placement exam; MAT 121M, concurrent enrollment in MAT 122, or equivalent high school or college course(s) is a prerequisite for this course.

[2]   MAT 224 may be used as a substitute.

[3]   COS 101 is a prerequisite for this course.

[*]   Courses whose number is followed by a letter fulfill a General Education requirement.
Students may not declare a B.S. in Mathematics and Data Science and a B.A. Mathematics.
Students may not declare a B.S. in Mathematics and Data Science and a Minor in Mathematics.