

DATA SCIENCE MAJOR

Requirements for a Major in Data Science BACHELOR OF SCIENCE

Code	Title	Hours
Core Courses		
DATA 110	Mathematical Foundations of Data Science	3
DATA 210	Principles of Data Science	3
DATA 310	Communicating with Data	3
MATH 213	Elementary Linear Algebra	3
MATH 372	Statistical Inference	3
CSCI 111	Introduction to Computer Science	4
CSCI 112	Data Structures	4
CSCI 236	Database Systems	3
CSCI 349	Machine Learning	3
SOCI 250	Data Ethics	3
Capstone		
MATH 415	Mathematics and Data Science Seminar	1
Application Domain Track		
Complete the requirements as specified in one of the approved application domain tracks.		6-8
Total Hours		39-41

Application Domain Tracks

The major in Data Science requires the completion of at least two courses in one of the following domain tracks:

Code	Title	Hours
Biology Track		6-8
Select one of the following BIOL courses		
BIOL 175	Experimental Field and Laboratory Ecology	
BIOL 310	Freshwater Ecology	
BIOL 325	Ecology	
BIOL 340	Ecological Simulation	
BIOL 350	Biostatistics	
Select one additional BIOL course		
Chemistry Track		6-8
CHEM 230	Quantitative Chemical Analysis	
or CHEM 305 Chemistry in Earth Systems		
Select one additional CHEM course		
Cybersecurity Track		6
CSEC 121	Privacy and Security	
CSEC 222	Computer and Data Security	
Economics Track		6
ECON 201	Principles of Economics-Micro	
ECON 202	Principles of Economics-Macro	
Environmental Studies Track		7
EVST 105	Environmental Problem Solving I	
EVST 200	Geographic Information Systems with Environmental Applications	
Mathematics Track		6-7
Select one of the following MATH or APMA courses:		

MATH 132	Calculus II	
MATH 203	Multivariable Calculus	
MATH 220	Discrete Mathematics	
MATH 345	Mathematical Biology	
MATH 371	Probability	
APMA 442	Numerical Analysis	
Select one additional MATH or APMA course		
Mathematical Biology Track		6-7
BIOL 121	Foundations of Experimental Biology	
or BIOL 123 Principles in Molecular Biology		
MATH 345	Mathematical Biology	
Physics Track		8
PHYS 151	Introductory Physics	
PHYS 152	Introductory Physics	
Political Science Track		6
PSCI 301	Research Methods	
Select one additional PSCI course		
Psychology Track		8
PSYC 200	Introduction to Psychology	
PSYC 201	Research Methods in Psychology	
Sociology and Criminology Track		6-8
Select one 200-level SOCI or CRIM course		
SOCI 300	Methods of Social Research	