

MAJOR IN DATA SCIENCE, STATISTICS CONCENTRATION

Major Completion Map

Freshman

Semester 1		Critical	Recommended	AUCC	Credits
CO 150	College Composition (GT-CO2)			1A	3
DSCI 100	First Year Seminar in Data Science				1
MATH 160	Calculus for Physical Scientists I (GT-MA1)			1B	4
Select one course from the following:		X			4
CS 163	CS1--No Prior Programming Experience				
CS 164	CS1--Computational Thinking with Java				
Arts and Humanities (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)				3B	3

Total Credits

15

Semester 2		Critical	Recommended	AUCC	Credits
CS 165	CS2--Data Structures	X			4
MATH 161	Calculus for Physical Scientists II (GT-MA1)			1B	4
STAT 158	Introduction to R Programming				1
STAT 315	Intro to Theory and Practice of Statistics				3
Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)				3A	4

Total Credits

16

Sophomore

Semester 3		Critical	Recommended	AUCC	Credits
CS 220	Discrete Structures and their Applications	X			4
MATH 261	Calculus for Physical Scientists III				4
STAT 341	Statistical Data Analysis I				3
Social and Behavioral Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#social-behavioral-sciences)				3C	3

Total Credits

14

Semester 4		Critical	Recommended	AUCC	Credits
DSCI 235	Data Wrangling				2
DSCI 369	Linear Algebra for Data Science	X			4
MATH 151	Mathematical Algorithms in Matlab I				1
STAT 342	Statistical Data Analysis II				3
Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)				3A	3
Historical Perspectives (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)				3D	3

Total Credits

16

Junior

Semester 5		Critical	Recommended	AUCC	Credits
DSCI 320	Optimization Methods in Data Science				3
Data Science Electives (See List on Concentration Requirements Tab)					3-4
Statistics Elective (See List on Concentration Requirements Tab)					3
Select one course from the following:				2	3
CO 300	Writing Arguments (GT-CO3)			2	
CO 301B	Writing in the Disciplines: Sciences (GT-CO3)			2	
CO 302	Writing in Digital Environments (GT-CO3)			2	

JTC 300	Strategic Writing and Communication (GT-C03)			2	
Elective					3
Total Credits					15-16
Semester 6		Critical	Recommended	AUCC	Credits
DSCI 335	Inferential Reasoning in Data Analysis				3
DSCI 336	Data Graphics and Visualization				1
Data Science Electives (See List on Concentration Requirements Tab)					3-5
Statistics Elective (See List on Concentration Requirements Tab)					3
Arts and Humanities (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)					3
Total Credits					13-15
Senior					
Semester 7		Critical	Recommended	AUCC	Credits
DSCI 445	Statistical Machine Learning			4B	3
Data Science Electives (See List on Concentration Requirements Tab)					3-4
Statistics Elective (See List on Concentration Requirements Tab)					3
Diversity, Equity, and Inclusion (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion)					3
Elective					3
Total Credits					15-16
Semester 8		Critical	Recommended	AUCC	Credits
DSCI 478	Capstone Group Project in Data Science	X		4A,4C	4
Data Science Electives (See List on Concentration Requirements Tab)					3-5
Statistics Elective (See List on Concentration Requirements Tab)					3
Elective					3
The benchmark courses in the 8th semester are the remaining courses in the entire program of study.					
Total Credits					13-15
Program Total Credits:					120