Bachelor of Science

Data Science (BS)

Web Site: https://www.odu.edu/datascience (https://www.odu.edu/datascience/)

Degree Program Guide

The Degree Program Guide is a suggested curriculum to complete this degree program in four years. It is just one of several plans that will work and is presented only as broad guidance to students. Each student is strongly encouraged to develop a customized plan in consultation with their academic advisor. Additional information can also be found in Degree Works.

Specialization Area: Artificial Intelligence and Machine Learning

Course	Title	Credit Hours
Freshman		
Fall		
ENGL 110C	English Composition (C or better required)	3
Oral Communication		3
Information Literacy and Research		3
DASC/SOC 205S	Data, Technology, Society	3
General Elective (or MATH 162M)		3
	Credit Hours	**15**
Spring		
ENGL 211C or ENGL 231C	Writing, Rhetoric, and Research (C or better required) or Writing, Rhetoric, and Research: Special Topics	3
Interpreting the Past		3
Human Behavior (may not use DASC 205S or SOC 205S)		3
MATH 163	Precalculus II	3
BDA 200T	Elements of Data Science	3
	Credit Hours	**15**
Sophomore		
Fall		
Nature of Science I		4
DASC 157 or CS 153	Introduction to Data Science Programming or Introduction to Programming with Python	4
STAT 130M	Elementary Statistics	3
CS 252	Introduction to Unix for Programmers	1
Language & Culture I (if needed) or General Elective		3
	Credit Hours	**15**
Spring		
Nature of Science II		4
DASC 255 or DASC 257 or CS 251	Data Processing with Python or Data Science Programming or Programming with Java	4
MATH 211	Calculus I	4
STAT 310	Introductory Data Analysis	3
	Credit Hours	**15**
Junior		
Fall		
DASC 300	Foundations of Data Science	3
IT 360T	Principles of Information Technology	3
MATH 212	Calculus II	4
Language & Culture II (if needed) or General Elective		3
Approved Area Elective		3
	Credit Hours	**16**
Spring		
DASC/PHIL 357E	Ethics and Data	3
IT 450	Database Concepts	3
MATH 316	Introductory Linear Algebra	3
General Elective		3
Approved Area Elective		3
	Credit Hours	**15**
Senior		
Fall		
Literature		3
CS 422	Introduction to Machine Learning	3
DASC 434	Principles of Data Science with Generative AI	3
Approved Area Electives		6
	Credit Hours	**15**
Spring		
Human Creativity		3
DASC 436W	Data Science Capstone Project (C or better required)	3
Approved Area Elective		3
General Electives		5
	Credit Hours	**14**
	Total Credit Hours	**120**

Specialization Area: Data Visualization

Course	Title	Credit Hours
Freshman		
Fall		
ENGL 110C	English Composition (C or better required)	3
Oral Communication		3
Information Literacy and Research		3
DASC/SOC 205S	Data, Technology, Society	3
General Elective (or MATH 162M)		3
	Credit Hours	**15**
Spring		
ENGL 211C or ENGL 231C	Writing, Rhetoric, and Research (C or better required) or Writing, Rhetoric, and Research: Special Topics	3
Interpreting the Past		3
Human Behavior (may not use DASC 205S or SOC 205S)		3
MATH 163	Precalculus II	3

BDA 200T	Elements of Data Science	3
	Credit Hours	**15**
Sophomore		
Fall		
Nature of Science I		4
STAT 130M	Elementary Statistics	3
DASC 157 or CS 153	Introduction to Data Science Programming or Introduction to Programming with Python	4
Language & Culture I (if needed) or General Elective		3
	Credit Hours	**14**
Spring		
DASC 255 or DASC 257 or CS 251	Data Processing with Python or Data Science Programming or Programming with Java	4
IT 150G	Basic Information Literacy and Research	3
DASC 300	Foundations of Data Science	3
COMM 260	Understanding Media	3
Language & Culture II (if needed) or General Elective		3
	Credit Hours	**16**
Junior		
Fall		
Nature of Science II		4
IT 360T	Principles of Information Technology	3
DASC 324	Introduction to Data Visualization	3
COMM 303	Introduction to Strategic Communications	3
Approved Area Elective		3
	Credit Hours	**16**
Spring		
DASC/PHIL 357E	Ethics and Data	3
IT 450	Database Concepts	3
DASC 424	Data Storytelling	3
IT 325	Web Site and Web Page Design	3
STAT 310	Introductory Data Analysis	3
	Credit Hours	**15**
Senior		
Fall		
Literature		3
DASC 434	Principles of Data Science with Generative AI	3
Approved Area Electives		6
General Elective		3
	Credit Hours	**15**
Spring		
Human Creativity		3
DASC 436W	Data Science Capstone Project (C or better required)	3
Approved Area Elective		3
General Electives		5
	Credit Hours	**14**
	Total Credit Hours	**120**

Specialization Area: Geospatial Analytics

Course	Title	Credit Hours
Freshman		
Fall		
ENGL 110C	English Composition (C or better required)	3
Oral Communication		3
Information Literacy and Research		3
DASC/SOC 205S	Data, Technology, Society	3
General Elective (or MATH 162M)		3
	Credit Hours	**15**
Spring		
ENGL 211C or ENGL 231C	Writing, Rhetoric, and Research (C or better required) or Writing, Rhetoric, and Research: Special Topics	3
Interpreting the Past		3
Human Behavior (may not use DASC 205S or SOC 205S)		3
MATH 163	Precalculus II	3
BDA 200T	Elements of Data Science	3
	Credit Hours	**15**
Sophomore		
Fall		
Nature of Science I		4
STAT 130M	Elementary Statistics	3
DASC 157 or CS 153	Introduction to Data Science Programming or Introduction to Programming with Python	4
GEOG 102T	Digital Earth: Geospatial Technology and Society	3
General Elective		1
	Credit Hours	**15**
Spring		
Nature of Science II		4
DASC 255 or DASC 257 or CS 251	Data Processing with Python or Data Science Programming or Programming with Java	4
STAT 310	Introductory Data Analysis	3
Approved Area Elective		3
General Elective		1
	Credit Hours	**15**
Junior		
Fall		
DASC 300	Foundations of Data Science	3
IT 360T	Principles of Information Technology	3
GEOG 402	Geographic Information Systems	3
GEOG 404	Digital Techniques for Remote Sensing	3

Language & Culture I (if needed) or General Elective		3
	Credit Hours	**15**
Spring		
DASC/PHIL 357E	Ethics and Data	3
IT 450	Database Concepts	3
GEOG 425	Internet Geographic Information Systems	3
Approved Area Elective		3
Language & Culture II (if needed) or General Elective		3
	Credit Hours	**15**
Senior		
Fall		
Literature		3
DASC 434	Principles of Data Science with Generative AI	3
GEOG 432	Advanced GIS	3
GEOG 462	Advanced Spatial Analysis	3
General Elective		3
	Credit Hours	**15**
Spring		
Human Creativity		3
DASC 436W	Data Science Capstone Project (C or better required)	3
Approved Area Elective		3
General Electives		6
	Credit Hours	**15**
	Total Credit Hours	**120**