Bachelor of Science

Data Science with a Major in Data for a Human World (BS)

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

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The increased amount of available data has escalated the demand for data science professionals. Data Science is a field of scientific methods, processes, and systems to extract knowledge or insights from a variety of data sources. The Major in Data for a Human World provides coursework allowing students to explore diverse pathways in Data Science, including intersections with the Humanities, Geography, Computer Science, Mathematics and the Visual Arts. The major creates an interdisciplinary understanding of Data Science by developing critical thinking and problem-solving skills from other perspectives and apply writing, communication, and creativity skills to applications in Data Science.

For more information about the program contact Dr. Teresa Kouri Kissel (tkouri@odu.edu), Associate Professor of Philosophy & Religious Studies.

Requirements

Lower-Division General Education

Written Communication (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#written)	6
Oral Communication (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#oral)	3
Mathematics (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#math)	3
Language and Culture (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#language)	0-6
Information Literacy and Research (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#information)	3
Human Behavior (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#behavior)	3
Human Creativity (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#creativity)	3
Interpreting the Past (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#interpret)	3
Literature (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#literature)	3
Philosophy and Ethics (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#philosophy)	3
The Nature of Science (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#nature)	8
Impact of Technology (http://catalog.odu.edu/undergraduate/requirements-undergraduate-degrees/#impact)	3

Mathematics: Met with STAT 130M in Foundations.

Human Behavior: May not be met with DASC 205S or SOC 205S.

Philosophy and Ethics: Met with DASC 357E/PHIL 357E in the major.

Impact of Technology: Met with BDA 200T in the major.

Upper-Division General Education

Met in the major.

Requirements for Graduation

Requirements for graduation include the following:

- Minimum of 120 credit hours.
- Minimum of 30 credit hours overall and 12 credit hours of upper-level courses in the major program from Old Dominion University.
- Minimum overall cumulative grade point average of C (2.00) in all courses taken.
- Minimum overall cumulative grade point average of C (2.00) in all courses taken toward the major.
- Minimum overall cumulative grade point average of C (2.00) in all courses taken toward a minor.
- Completion of ENGL 110C, ENGL 211C or ENGL 231C, and the writing intensive (W) course in the major with a grade of C or better. The W course must be taken at Old Dominion University.
- Completion of Senior Assessment.

Data for a Human World Major

General Education

Complete lower-division requirements		32-38
Upper Division General Education (met in the major)		
Foundation Courses		
MATH 163	Precalculus II [**]	3
STAT 130M	Elementary Statistics	3
Select one of the following programming options:		8
DASC 157 & DASC 257	Introduction to Data Science Programming and Data Science Programming	
CS 153 & DASC 255	Introduction to Programming with Python and Data Processing with Python	
CS 153 & CS 251	Introduction to Programming with Python and Programming with Java	
Core Requirements		
BDA 200T	Elements of Data Science	3
DASC/SOC 205S	Data, Technology, Society	3
DASC 300	Foundations of Data Science	3
DASC/PHIL 357E	Ethics and Data	3
DASC 434	Data Curation and Management	3
IT 360T	Principles of Information Technology	3
IT 450	Database Concepts	3
STAT 310	Introductory Data Analysis	3
DASC 436W	Data Science Capstone Project [*]	3
Major Electives		
Select three of the following:		9
COMM 402	Communicating Data	
ENGL 370	English Linguistics	
HIST 396	Topics in History [***]	
IDS 301	Data and Humanities Research	
PHIL 447	Philosophy of Information	
SOC 309	Population and Society	
WGS 495	Topics in Women's, Gender, and Sexuality Studies [***]	
Select six of the following:		18
COMM 303	Introduction to Strategic Communications	
COMM 408	Health Communication	
CRJS 344	Social Science and Crime Mapping	
ENGL 334W	Technical Writing	
GEOG 300	Maps and Geographic Information	
GEOG 402	Geographic Information Systems	
IDS 300W	Interdisciplinary Theory and Concepts	
QUST/WGS 302W	Dimensions of Diversity: Intersectionality Among Women	

PHIL/AI 446	Artificial Intelligence (AI) Ethics and Policy	
SOC 337	Social Research Methods	
WGS 470	Feminist Research Methods	
Total Credit Hours		**100-106**

*   Writing Intensive: C or better required.

**   MATH 162M may be needed as a prerequisite.
           Recommend taking as an elective if needed.

***   Coordinator approval required (Topics course).

No more than two classes, or six credits, may be counted for both the major and a minor. Some minors may allow fewer credits to share.

Electives

Elective credit may be needed to meet the minimum of 120 hours required for the degree.

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.

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
Language & Culture I (if needed) or General Elective		3
General Elective		2
	Credit Hours	**16**
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
Language & Culture II (if needed) or General Elective		3
	Credit Hours	**14**
Junior		
Fall		
DASC 300	Foundations of Data Science	3
IT 360T	Principles of Information Technology	3
Approved Major Electives		9
	Credit Hours	**15**
Spring		
DASC/PHIL 357E	Ethics and Data	3
IT 450	Database Concepts	3
General Elective		3
Approved Major Electives		6
	Credit Hours	**15**
Senior		
Fall		
Literature		3
DASC 434	Data Curation and Management	3
Approved Major Electives		6
General Elective		3
	Credit Hours	**15**
Spring		
Human Creativity		3
DASC 436W	Data Science Capstone Project (C or better required)	3
Approved Major Electives		6
General Elective		3
	Credit Hours	**15**
	Total Credit Hours	**120**