

Data Science (B.S.)

2024-2025 catalog

Student Name: _____ ID Number: _____

Major Requirements

Open only to students graduating May 2024 or later.

All classes must be completed with a C- grade or better. Each course may count only once toward the major. No more than 4 credits of internship may count towards the major. Students majoring in Data Science are not eligible to minor in Data Science or Statistics.

Term Completed/Planned	Grade	Credit	Course #	Title
Complete one (1) introductory statistics				
_____	_____	4	DST164	Introduction to Statistics (with R) (NSM)
_____	_____	4	MAT163	Introductory Statistics (NSM) – <i>offered infrequently</i>
_____	_____	4	MIS379	Quantitative Methods for Business and Economics
_____	_____	4	PSY215	Research Methods and Statistics I
_____	_____	4	SOC362	Statistical Analysis
Complete all of the following				
_____	_____	4	DST234	Introduction to Data Science (and R) (NSM)
_____	_____	4	DST334	Statistical Modeling – <i>formerly MAT273</i>
_____	_____	4	CSC165 and 165L	Introduction to Computer Programming (Python)
_____	_____	4	MAT145 and 145L	Calculus I (NSM)
_____	_____	4	MAT315	Linear Algebra – <i>formerly MAT246</i>
_____	_____	4	DST490	Data Visualization for Social Justice (KC)
Complete one (1) databases (SQL) course				
_____	_____	4	MIS270	Data Management for Business
_____	_____	4	CSC311	Web Applications and Databases
Complete one (1) machine learning course				
_____	_____	4	DST314	Programming for Data Science
_____	_____	4	DST475	Machine Learning (KC)
Complete one (1) additional programming course				
_____	_____	4	CSC170 and 170L	Introduction to Object-Oriented Programming (Java)
_____	_____	4	CSC311	Web Applications and Databases
_____	_____	4	DST314	Programming for Data Science
_____	_____	4	URB295	Topics: Geographic Information Systems (<i>this topic only</i>)
Complete one (1) Introduction to Social Justice elective, chosen from AIS105, AIS205, ANT141, CCS100, CRS101, HIS122, HIS225, HIS316, POL122/URB122, SOC265, SWK210, SWK 280, WST201 or another approved introduction to social justice elective:				
_____	_____	4		
Complete one (1) communications course, chosen from ART102, ART201, COM352, ENL220, ENL226, NMS220:				
_____	_____	4		
Complete two (2) advanced electives through one of the following four options:				
<i>Advanced Elective Option 1: Both MAT302 and MAT350</i>				
_____	_____	4	MAT302	Discrete Mathematical Structures – <i>formerly MAT271</i>
_____	_____	4	MAT350	Graph Theory – <i>formerly MAT304</i>
<i>Advanced Elective Option 2: Both CSC341 and CSC351</i>				
_____	_____	4	CSC341	Data Structures – <i>formerly CSC210</i>
_____	_____	4	CSC351	Algorithms – <i>formerly CSC320</i>
<i>Advanced Elective Option 3: Both MAT373 and DST374</i>				
_____	_____	4	MAT373	Probability Theory
_____	_____	4	DST374	Mathematical Statistics

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Advanced Elective Option 4: Any two of the following courses

_____	_____	4	ART315	Graphic Systems
_____	_____	4	CSC311	Web Applications and Databases
_____	_____	4	DST314	Programming for Data Science
_____	_____	4	DST394	Topics in Statistics
_____	_____	4	DST395	Topics in Data Science
_____	_____	4	DST399	Internship (<i>or 4 credits of DST 396, 397, 398</i>)
_____	_____	4	DST475	Machine Learning
_____	_____	4	MAT465	Modeling and Differential Equations in Biological and Natural Sciences

Complete **one (1)** Speaking skill course

_____	_____	4	COM111	Public Speaking
_____	_____	4	COM115	Scientific and Technical Public Speaking
_____	_____	2	MAT201	Communicating Mathematics
_____	_____	4	Other approved speaking:	

Each course may count only once towards the major.

At most 4 credits of internship may count towards the major.

Students completing a major in Data Science are not eligible for a minor in Data Science or Statistics.