

DATA SCIENCE - BS

Our data science major curriculum intentionally provides a foundation and pathway for engaging broad discipline interests in the arts, humanities, social sciences, physical sciences, health sciences, and business. Data - in any domain - is at our disposal almost instantaneously. We need the knowledge and skills to manage, analyze, summarize and interpret the data, and then be able to effectively communicate, both visually and verbally, the results in context within an ethical and respectful frame.

Students majoring in data science at St. Catherine University will learn to navigate, model, visualize, summarize, and communicate with data within a vibrantly interdisciplinary, collaborative environment. Students will engage in creating appropriate models to analyze and interpret data, learn to ask pertinent questions, study ethical considerations, and develop communication skills involved in data science and data analytics within contextual variety among the liberal arts spectrum.

Data Science majors are required to complete a domain minor or a double major and secure at least one internship as part of the major. They must also choose an interdisciplinary emphasis track based on their personal or professional interests or goals.

This major is offered in the College for Women only.

Code	Title	Credits
Required Prerequisite Courses		
CSCI 1110	Introduction to Computer Science	4
MATH 1130	Calculus I	4
STAT 1090	Statistical Analysis	4
Required Major Courses		
DSCI 1000	Telling Stories with Data - Introduction to Data Visualization	4
DSCI 2100	Introduction to Programming: Applied Computing I	4
DSCI 3000W	AI Data Ethics, Governance & Social Impact	4
DSCI 3100	Database Management	4
DSCI 3200W	Analyzing Social Issues with Data	4
DSCI 3300	Introduction to Machine Learning for Data Science	4
DSCI 4100	Introduction to Cloud Computing	4
DSCI 4200	Introduction to Large Language Models: A Machine Learning Approach	4
DSCI 4952 or DSCI 4604	Independent Study Internship	2-4
Interdisciplinary Track Electives ¹		16
Required Supporting Courses		
CSCI 1120	Algorithms and Java Programming	4
MATH 1140	Calculus II	4
STAT 2090	Statistical Modeling	4
STAT 3090	Predictive Analysis	4
Additional DSCI Elective		4
Total Credits		82-84

are encouraged to consult with their academic advisor to explore different pathways that best suit their individual goals.

Data science majors satisfy the Writing Requirement for Majors by completing DSCI 3000W AI Data Ethics, Governance & Social Impact and DSCI 3200W Analyzing Social Issues with Data. They complete the liberal arts core Writing Requirement with two other writing-intensive courses (CORE 1000W The Reflective Woman and CORE 3990W Global Search for Justice).

Freshman		
Fall Credits	Spring Credits	
DSCI 1000	4 CSCI 1110	4
MATH 1130	4 STAT 1090	4
Core Courses, as needed	MATH 1140	4
	Core Courses, as needed	
8		12
Sophomore		
Fall Credits	Spring Credits	
DSCI 3000W	4 DSCI 2100	4
CSCI 1120	4 DSCI 3300	4
Core Courses, as needed	Core Courses, as needed	
8		8
Junior		
Fall Credits	Spring Credits	
DSCI 3100	4 STAT 3090	4
STAT 2090	4 DSCI 4200	4
Interdisciplinary Elective	4 DSCI 3200W	4
	Interdisciplina Elective	4
12		16
Senior		
Fall Credits	Spring Credits	
DSCI 4100	4 DSCI 4604 or 4952	2-4
Data Science Elective	4 Interdisciplina Elective	4
Interdisciplinary Elective	4	
12		6-8
Total Credits: 82-84		

¹ Suggested interdisciplinary tracks include Business Administration, Economics, Sociology, Psychology, and Arts and Humanities. Students