

## Data Science, B.S.

2024-25 Catalog

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The example four-year plan is designed to provide a blueprint for students to complete their degrees within four years. These plans include recommended sequences of courses. Individual plans will vary based on previously earned credit, such as Dual Enrollment and AP credit, as well as the student's academic goals. Students will work with an academic advisor to develop a more individualized plan to complete their degree.

This example four-year plan is applicable to students admitted during the 2024–25 academic year.

Total Credits Required: 120 credits

Notes:

Required GPA for Graduation: 2.0 (institutional)

Courses requiring a C or better are denoted with an asterisk (\*). Courses only offered in the fall semester are denoted with a plus sign (+).

Courses only offered in the spring semester are denoted with a double-plus sign (++).

Legend is available on the last page of this document.

Year 1								
	Fall	Spring						
Course	Title	Hours	Area	Course	Title	Hours	Area	
BIDS 1705	First-Year Seminar	1		GC1Y 1000	Critical Thinking (student's choice) (pre-req to GC2Y 2000)	3	Core	
ENGL 1101*	English Composition I (pre-req to ENGL 1102)	3	Core	ENGL 1102	English Composition II	3	Core	
CSCI 1301*	Computer Science I (pre-req to CSCI 1302 and 2351)	3	Core + Field	CSCI 1302*	Computer Science II (pre-req to CSCI 3410 and 3680)	3	Field	
MATH 1113*	Pre-Calculus (pre-req to MATH 1261, MATH 1401, and CSCI 3680)	4	Core	MATH 1261*	Calculus I (pre-req to MATH 1262 and 2150)	4	Core + Cognate	
Core Art	Fine Arts (student's choice)	3	Core	MATH 1401*	Elementary Statistics (pre-req to CSCI 3710)	3	Core + Field	
Total Semester Hours: 14 Total Semester Hours: 16								
ENGL 1101, ENGL 1102, MATH 1113, and GC1Y 1000 must be completed by 30 earned hours.								

First-Year Academic Seminar is a graduation requirement and impacts a student's GPA; however, it does not count toward

the minimum of 120 semester hours required for a degree.

Qualified students may start with MATH 1261: Calculus I, which will fulfill their Core Math requirement. In that case, MATH 1261 will count as a pre-requisite to MATH 1401, and MATH 1262 will count toward their Core STEM requirement.

			Ye	ar 2			
	Fall	Spring					
Course	Title	Hours	Area	Course	Title	Hours	Area
CSCI 3410*	Intro to Data Structures (pre-req to CSCI 3710, 3711, 4520, and 4710)	3	CS	CSCI 3680*++	Discrete Structures (pre-req to CSCI 4520)	4	CS
MATH 1262*	Calculus II (pre-req to MATH 4600)	4	Cognate	MATH 2150	Linear Algebra	3	Cognate
Core Science	Science with Lab (student's choice)	4	Core	CSCI 2810*++	IS/CS Professional Development	1	Cognate
HIST 2111 or HIST 2112	The United States to 1877 or The United States Since 1877	3	Core	CSCI 2800*++	Social & Professional Issues	3	Field
				GC2Y 2000	Global Perspectives (student's choice)	4	Core
	Total Semester Hours:	14			Total Semester Hours:	15	
Summer	An additional professional internship	is stron	gly encou	ıraged.			
Notes:	Complete a concentration or a minor/major in any area (except Computer Science, Mathematics, or Management Information Systems) <b>or</b> complete 3 courses in the same subject from the list of Emphasis Area electives. See catalog or DegreeWorks for options.  GC2Y 2000 must be taken between 30–59 earned hours.						

Year 3							
	Fall	Spring					
Course	Title	Hours	Area	Course	Title	Hours	Area
CSCI 3710*+	Data Mining (pre-req to CSCI 4711)	3	CS	CSCI 3711*++	Data Analysis (pre-req to CSCI 4711)	3	cs
CSCI 4710*+	Databases	3	CS	■( `S( `1 /1 / 1 1 ^ + +	Machine Learning (pre-req to CSCI 4712)	3	CS
CSCI 2811*+	IS/CS Career Preparation	1	Cognate	POLS 1101	American Government	3	Core
MATH 4100*+	Linear Regression (pre-req to CSCI 4712 and MATH 4700)	3	M&S	MATH 4600*++	Probability (pre-req to MATH 4700)	3	M&S
Core Humanities	Humanities and Ethics (student's choice)	3	Core	Emphasis* or Major Elective*	Emphasis area elective or major elective	3	Emphasis
	Total Semester Hours: 13 Total Semester Hours:				15		
Summer CSCI 4960: Internship (3 credit hours)							
Notes:	MATH 4100 and MATH 4600 are offered in even-numbered years only. Schedule will need to be adjusted if Year 3 is odd-numbered.  Either CSCI 3710 or CSCI 3711, with a grade of C or better, may be used as a pre-requisite to CSCI 4711.  Some emphasis electives may be satisfed by core classes. In this case, students may take a major elective instead.						

Year 4							
	Fall	Spring					
Course	Title	Hours	Area	Course	Title	Hours	Area
CSCI 4520*+	Analysis of Algorithms	3	CS	MATH 4700*++	Statistical Computing	3	M&S
CSCI 4712*+	Big Data Analysis	3	CS	Core Social Science	Social Science (student's choice)	3	Core
Core Science	Science with Lab (student's choice)	4	Core	Major Elective*	Major elective	3	Major
Emphasis*	Emphasis area elective	3	Emphasis	Emphasis*	Emphasis area elective	3	Emphasis
Gen Elective	Any general elective course	3	Elective	CSCI 4999* or MATH 4999*	Undergraduate Research	3	Capstone
Total Semester Hours: 16					Total Semester Hours:	15	
MATH 4700 is offered in odd-numbered years only. Schedule will need to be adjusted if Year 3 is odd-numbered. Either MATH 4100 or MATH 4600, with a grade of C or better, may be used as a pre-req to MATH 4700. Either MATH 4100 or MATH 4700, with a grade of C or better, may be used as a pre-req to CSCI 4712. General electives can be in any discipline and any level (1000–4999).							

	Legend					
Area	This section of the plan references the area of the curriculum the course fulfills.					
	Core IMPACTS — coursework required for every student regardless of major, which includes the following areas:					
Core	Institutional Priority (GC1Y 1000 and GC2Y 2000); Mathematics and Quantitative Skills; Political Science and U.S. History;					
	Arts, Humanities, and Ethics; Communicating in Writing; Technology, Mathematics, and Sciences; and Social Sciences.					
Field	Core Field of Study courses, part of each major's requirements. These courses prepare students for further study in their					
rieid	chosen major field. Field of Study courses are specific to each major program.					
CS	Computer Science required courses					
M&S	Mathematics and Statistics required courses					
Major	Data Science Major electives. These are courses chosen as part of the major requirements.					
	Emphasis Area electives are either courses required to complete a concentration or a minor/major in any area (except					
Emphasis	computer science, math, or management information systems) <b>or</b> 3 courses chosen from the same prefix (as listed in the					
Emphasis	2024–25 catalog). Some emphasis electives may be satisfied by Core Technology, Mathematics, and Science courses. In					
	this case, students may take major electives instead.					
	Course(s) a student selects. Hours are needed to meet overall graduation hours. Number of electives varies per major.					
Elective	Electives can be used towards GC Journeys, minors, concentrations, certificates, or professional/graduate school pre-					
	requisites, or to take courses of interest.					
Cognata	Cognate courses are required courses within a student's curriculum. These courses are connected to the major but may be					
Cognate	from other academic disciplines.					