South Dakota State University

Bachelor of Science
Major: Mathematics
Specialization: Data Science
2026-2027 Sample 4-Year Plan
Total Degree Requirements: 120 credits

Student _____ **Student ID#** _____ **Student Phone #** _____

Advisor _____ **Minimum GPA** 2.00 **Minor/Career Interest(s)** _____

Students are not limited to this plan; it is meant to be used as a guide for planning purposes in consultation with your advisor. The sample schedule is one possible path to completing your degree within four years. For official program requirements, please refer to the Undergraduate Catalog.

FIRST YEAR

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ENGL 101	Composition I (SGR #1)	p. Placement	3		
MATH 123	Calculus I (SGR #5)	p. Placement	4		
MATH 198	Mathematics Professions 1		1	F	
SGR #3	Social Sciences	SGR #3 is satisfied with coursework from 2 disciplines; one must meet civics requirement	3		
SGR #6	Natural Sciences		3		
		Total Credit Hours	14		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CSC 150	Computer Science I		3		
ENGL 201 or ENGL 277	Composition II (SGR #1) or Technical Writing in Engineering (SGR #1)	p. ENGL 101	3		
MATH 125	Calculus II	p. MATH 123	4		
SGR #2	Oral Communication		3		
SGR #6	Natural Sciences		3		
		Total Credit Hours	16		

SECOND YEAR

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 225	Calculus III	p. MATH 125	4		
MATH 230	Mathematics Professions 2	p. MATH 125	1	F	
MATH 250	Introduction to Linear Algebra and Proof	p. MATH 123	3		
STAT 382	Probability	p. MATH 125	3	F	
STAT 415	R Programming	p. INFO 101 or CSC 150	3	F	
		Total Credit Hours	14		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 253	Logic, Sets, and Proof	p. MATH 125 and MATH 250 (both with grade of C or better)	4		
SGR #3	Social Sciences	SGR #3 is satisfied with coursework from 2 disciplines; one must meet civics requirement	3		
SGR #4	Arts and Humanities	Courses taken to meet this requirement must be from two different disciplines or a sequence of courses in modern languages.	3		
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STAT 482	Mathematical Statistics	p. STAT 382	3	S	
		Total Credit Hours	16		

Information Subject to Change. This is not a contract.

p. = Course Prerequisite
Semester: F = Fall, S = Spring, SU = Summer

THIRD YEAR

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 321	Differential Equations	p. MATH 125	3		
Choose 2:			6		
MATH 316	Discrete Mathematics or	p. MATH 250			
MATH 475	Operations Research I or	p. MATH 125 -strongly recommend MATH 250		F	
STAT 442	Exploratory Data and Cloud Based Data Analysis or	p. STAT 482 and STAT 414 or 415		F	
STAT 460	Time Series Analysis or	p. STAT 482		F	
CSC 250	Computer Science 2	p. CSC 150			
General Electives	General Electives		6		
		Total Credit Hours	15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 425	Real Analysis I	p. MATH 253 (C or better)	3		
MATH 412	Linear Algebra	p. MATH 250	3		
Choose 2:	Courses cannot be ones already taken		6		
MATH 316	Discrete Mathematics or	p. MATH 250			
MATH 374	Scientific Computation or	p. CSC 150 and MATH 125		S	
STAT 383	Geospatial Data Analysis or	p. MATH 115 or STAT 281 or STAT 381 or STAT 382		S	
STAT 410	SAS Programming or			S	
STAT 445	Non-Parametric Statistics or	p. STAT 382		S	
STAT 451	Predictive Analytics or	p. STAT 482 and STAT 415		S	
CSC 300	Data Structures	p. CSC 250			
General Electives	General Electives		3		
		Total Credit Hours	15		

FOURTH YEAR

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 301	Mathematics Professions 3	p. MATH 230	2		
Choose 2:	Courses cannot be ones already taken		6		
MATH 316	Discrete Mathematics or	p. MATH 250			
MATH 415	Advanced Linear Algebra or	p. MATH 315			
MATH 475	Operations Research I or	p. MATH 125 – strongly recommend MATH 250		F	
STAT 442	Exploratory Data and Cloud Based Data Analysis or	p. STAT 482		F	
STAT 460	Time Series Analysis or	p. STAT 482		F	
CSC 300	Data Structures	p. CSC 250			
General Electives	General Electives		7		
		Total Credit Hours	15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 401	Mathematics Professions 4		1		
Choose 2:	Courses cannot be ones already taken		6		
MATH 316	Discrete Mathematics or	p. MATH 250			
MATH 374	Scientific Computation or	p. CSC 150 and MATH 125		S	
STAT 383	Geospatial Data Analysis or	p. MATH 115 or STAT 281 or STAT 381 or STAT 382		S	
STAT 410	SAS Programming or			S	
STAT 445	Non-Parametric Statistics or	p. STAT 382		S	
STAT 451	Predictive Analytics or	p. STAT 482		S	

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p. = Course Prerequisite
Semester: F = Fall, S = Spring, SU = Summer

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CSC 300	Data Structures (or CSC 325, 447, or 484)	p. CSC 250			
General Electives	General Electives		8		
		Total Credit Hours	15		

COMMENTS/NOTES

The Department of Mathematics and Statistics has additional plans of study in different focus areas including Applied Mathematics and Actuarial/Financial Mathematics. Please contact your advisor for additional information.

If progressing on to the M.S. in Data Science or Statistics, consider taking STAT 445, 451, 415, and 460 as STAT 545, 551, 515, and 560.

Students from all academic majors can pursue graduation with Fishback Honors College distinction. View the Honors program requirements.