



Bachelor of Science

Major: Mathematics Specialization: Data Science

2021-2022 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		
INFO 101	Introduction to Informatics (SGR #6)		3		
MATH 123	Calculus I (SGR #5)	p. Placement	4		
MATH 198	The Mathematics Profession		1	F	
PHYS 111-111L or PHYS 211-211L or PHYS 213-213L or CHEM 106-106L or CHEM 112-112L or BIOL 151-151L	Introduction to Physics I and Lab (SGR #6) or University Physics I and Lab (SGR #6) or University Physics II and Lab (SGR 6) or Chemistry Survey and Lab (SGR #6) or General Chemistry I and Lab (SGR #6) or General Biology I and Lab (SGR #6)	PHYS 111: p. MATH 114 or higher PHYS 211: p. MATH 123 (completed or concurrent) PHYS 213: p. PHYS 211 & MATH 125 (completed or concurrent) CHEM 106: p. 1 MATH course or placement CHEM 112: p. MATH 114 or higher (completed or concurrent)	4		
Total Credit Hours			15		

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 #3	Social Science/Diversity		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	Sophomore Seminar	p. MATH 125	1	F	
MATH 250	Introduction to Linear Algebra and Proof	p. MATH 123	3		
STAT 382	Probability and Statistics I	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	4		
SGR #4	Arts and Humanities/Diversity				
STAT 482	Probability and Statistics II	p. MATH 125	3	S	
SGR #3	Social Science/Diversity		3		
SGR #4	Arts and Humanities Diversity		3		
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
Choose 1:			3		
MATH 316	Discrete Mathematics or	p. MATH 253			
MATH 321	Differential Equations	p. MATH 125			
MATH 315	Linear Algebra	p. MATH 253	3		
Choose 1:			3		
MATH 475	Operations Research I or	p. MATH 125 or 315		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 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 125 & MATH 315	3		
Choose 3:			9		
MATH 316	Discrete Mathematics or	p. MATH 253			
STAT 383	Geospatial Data Analysis or	p. STAT 281 or STAT 381 or STAT 382		S	
STAT 410	SAS Programming or			S	
MATH 374	Scientific Computation or	p. CSC 150 and MATH 125		S	
STAT 445	Non-Parametric Statistics or	p. STAT 382		S	
STAT 451	Predictive Analytics or	p. STAT 482		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 401 (s03)	Senior Capstone		2		
Choose 2:			6		
MATH 316	Discrete Mathematics or	p. MATH 253			
MATH 415	Advanced Linear Algebra or	p. MATH 315			
MATH 475	Operations Research I or	p. MATH 125 or 315		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 250	Computer Science 2	p. CSC 150			
General Electives	General Electives		7		
Total Credit Hours			15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 401 (s04)	Senior Capstone		2		
Choose 2:			6		
MATH 316	Discrete Mathematics or	p. MATH 253			
STAT 383	Geospatial Data Analysis or	p. STAT 281 or STAT 381 or STAT 382		S	
STAT 410	SAS Programming or			S	
MATH 374	Scientific Computation or	p. CSC 150 and MATH 125		S	
STAT 445	Non-Parametric Statistics or	p. STAT 382		S	

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



Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
STAT 451	Predictive Analytics or	p. STAT 482		S	
CSC 300	Data Structures (or CSC 325, 447, or 484)	p. CSC 250			
General Electives	General Electives		6		
		Total Credit Hours	14		

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 MS in Data Science or Statistics, consider taking STAT 445, 451, 453, and 460 as STAT 545, 551, 553, and 560.

Students from all academic majors can pursue graduation with Fishback Honors College distinction. View the [Honors program requirements](#).