



Bachelor of Science

Major: Mathematics

Specialization: Data Science

2019-2020 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) BIOL 151: no prerequisite	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 #4	Arts and Humanities 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 253	Logic, Sets, and Proof	p. MATH 125	3		
STAT 382	Probability and Statistics I	p. MATH 125	3	F	
SGR #3	Social Sciences/Diversity		3		
Total Credit Hours			14		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 315	Linear Algebra	p. MATH 253	4		
STAT 415	R Programming	p. INFO 101 or CSC 150	3	S	
STAT 482	Probability and Statistics II	p. MATH 125	3	S	
SGR #3	Social Science/Diversity		3		

Information Subject to Change. This is not a contract.

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



Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
SGR #4	Arts and Humanities Diversity		3		
Total Credit Hours			16		

Third Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 321	Differential Equations	p. MATH 125	3		
MATH 413	Abstract Algebra I	p. MATH 315	3		
MATH 475	Operations Research I	p. MATH 125 or 315	3	F	
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		
STAT 383	Geospatial Data Analysis	p. STAT 281 or STAT 381 or STAT 382	3	S	
STAT 410	SAS Programming		3	S	
STAT 442	Exploratory and Cloud-Based Data Analysis	p. STAT 281 or STAT 381 or STAT 482	3	S	
General Electives	General Electives		3		
Total Credit Hours			15		

Fourth Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 401	Senior Capstone		2		
STAT 453	Applied Bayesian Statistics	p. MATH 125, STAT 382, & STAT 414 or 415	3	F	
STAT 460	Time Series Analysis	p. STAT 441 or 482	3	F	
General Electives	General Electives		7		
Total Credit Hours			15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 401	Senior Capstone		2		
STAT 445	Nonparametric Statistics	p. STAT 281 or STAT 381 or STAT 382	3	S	
STAT 451	Predictive Analytics I	p. STAT 482	3	S	
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](#).