SOUTH DAKOTA STATE UNIVERSITY

Bachelor of Science
Major: Data Science
2020-2021 Sample Four 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
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		
STAT 101	Introduction to Data Science		3	F	
		Total Credit Hours	15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CSC 150	Computer Science I		3		
ENGL 101	Composition I (SGR #1)		3		
MATH 125	Calculus II	p. MATH 123	4		
SGR #2	Oral Communication		3		
SGR #4	Arts & Humanities/Diversity		3		
		Total Credit Hours	16		

Second Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ENGL 201 or ENGL 277	Composition II (SGR #1) or Technical Writing in Engineering (SGR #1)	p. ENGL 101	3		
MATH 225	Calculus III	p. MATH 125	4		
MATH 230	Sophomore Seminar	p. MATH 125	1	F	
SGR #3	Social Sciences/Diversity		3		
STAT 382	Probability and Statistics I	p. MATH 125	3	F	
		Total Credit Hours	14		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
STAT 410	SAS Programming		3	S	
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		
SGR #4	Arts & Humanities/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
		Total Credit Hours	15		

Third Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 250	Introduction to Linear Algebra and Proof	p. MATH 123	3		
STAT 442	Exploratory and Cloud-Based Data Analysis	p. STAT 441 or 482	3	F	
STAT 460	Time Series Analysis	p. STAT 441 or 482	3	F	
General Electives	General Electives		6		
		Total Credit Hours	15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 253	Logic, Sets, and Proof	p. MATH 125 and MATH 250	4		
STAT 445	Nonparametric Statistics	p. STAT 281 or 381 or 382	3	S	
STAT 383	Geospatial Data Analysis	p. STAT 281 or 381 or 382	3	S	
General Electives	General Electives		6		
		Total Credit Hours	16		

Fourth Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 475	Operations Research I	p. MATH 125 or 315	3	F	
General Electives	General Electives		12		
		Total Credit Hours	15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 401	Senior Capstone		2		
STAT 451	Predictive Analytics I	p. STAT 415 & STAT 482	3	S	
General Electives	General Electives		9		

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 451 and MATH 475 as STAT 551 and MATH 575, and six other credits of graduate statistics courses as General Electives during the fourth year.

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

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