Bachelor of Science Major: Physics

Specialization: Science Teaching 2024-2025 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
CHEM 112/112L	General Chemistry I and Lab	c. MATH 114 or higher	4	F	
EDFN 101	Exploration of Teaching and Learning		1		
MATH 123	Calculus I (SGR #5)	p. Placement Grade of C or higher required.	4		
PHYS 119	First Year Seminar in Physics		1	F	
PHYS 185/185L	Astronomy I and Lab	Suggested Physics Technical Elective (other option PHYS 187/187L in S)	3	F	
SGR #2	Oral Communication	CMST 101 Recommended Grade of C or higher required.	3		
		Total Credit Hours	16		•

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 114/114L	General Chemistry II and Lab	p. CHEM 112/112L	4	S	
MATH 125	Calculus II	p. MATH 123	4		
SGR #1	Written Communication	ENGL 101 Recommended Grade of C or higher required.	3		
SGR #3	Social Sciences (from two different disciplines)	See list in catalog	3		
		Total Credit Hours	14		

SECOND YEAR

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
MATH 225	Calculus III	p. MATH 125	4		
MATH 321	Differential Equations	p. MATH 125	3		
*PHYS 211/211L	University Physics I and Lab (SGR #6)	p. MATH 123	5	F	
SGR #4	Arts and Humanities (from two different disciplines or a sequence of a foreign language)	See list in catalog	3		
		Total Credit Hour	15		

^{*}Students are eligible to petition for a MATH 123 and PHYS 211/L concurrent enrollment if they qualify for MATH 123 placement and want to take PHYS 211/L in the first year rather than the second year*

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EDFN 340	Adolescent Development in Educational Contexts	p. Teaching, Learning and Leadership department consent required.	3		
EDFN 351	Teaching and Learning I	p. Teaching, Learning and Leadership department consent required.	1		
EE 216/216L	Linear Circuits I and Lab	c. MATH 125	4	S	
PHYS 213/213L	University Physics II and Lab (SGR #6)	p. PHYS 211/L	5	S	
SGR #1	Written Communication	ENGL 201 OR ENGL 277 Recommended p. ENGL 101 and PHYS 119	3		
		Total Credit Hours	16		



THIRD YEAR

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
AIS 211 (SGR#3)	South Dakota American Indian Culture and Education		3		
PHYS 316/316L	Measurement Theory and Lab	p. PHYS 213/L or PHYS 113/L	2	F	
PHYS 331	Introduction to Modern Physics	p. PHYS 213/L or PHYS 113/L	3	F	
PHYS 341	Thermodynamics	p. MATH 225	2	F	
PHYS 343	Statistical Physics	p. MATH 321	2	F	
PHYS 451	Classical Mechanics	p. MATH 321 and 225	4	F	
		Total Credit Hours	16		

Spring

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Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EDFN 352/352L	Teaching and Learning II and Lab	p. EDFN 351	5		
PHYS 421	Electromagnetism	p. MATH 321 and 225	4	S	
PHYS 437	Foundations of Health Physics	p. MATH 123 and PHYS 213	3	S(even)	
SGR #4	Arts and Humanities (from two different disciplines or a sequence of a foreign language)	See list in catalog	3		
		Total Credit Hours	15		

FOURTH YEAR

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EDFN 453/453L	Teaching and Learning III and Lab	p. Teaching, Learning and Leadership	7		
		department consent required.			
SEED 413	Science Methods		3		
SEED 450	Reading and Content Literacy	p. Teaching, Learning and Leadership	2		
		department consent required.			
General Elective			3		
		Total Credit Hours	15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EDFN 454	Teaching and Learning IV	p. EDFN 453	11		
SEED 456	Capstone/Action Research	c. EDFN 454	1		
		Total Credit Hours	12		

COMMENTS/NOTES

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

As part of this program, students must complete:

• a capstone course in the major (SEED 456)