South Dakota State University

Bachelor of Science
Major: Precision Agriculture
2023-2024 Sample 4-Year Plan

Total Degree Requirements: 120 credits

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

Advisor _____ **Minimum GPA** *C or higher; 2.5 in major required classes **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
AST 119* or PS 119*	First Year Seminar		1	F	
BIOL 101-101L	Biology Survey I & Lab (SGR #6)		3	F/S	
MATH 114	College Algebra (SGR #5)	p. Placement	3		
PS 103-103L*	Crop Production and Lab		3	F/S	
SGR #2	Oral Communication (SGR #2)		3		
SGR #4	Arts and Humanities (SGR #4)		3		
		Total Credit Hours	16		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
BOT 201-201L	General Botany and Lab (SGR #6)	p. BIOL 101 or BIOL 151	3	S	
ECON 201	Principles of Microeconomics (SGR #3)		3	F/S	
PRAG 203-203L*	Intro to Precision Agriculture and Lab		3	F/S	
SGR #1	Written Communication (SGR #1)	p. Placement	3		
SGR #4	Arts and Humanities (SGR #4)		3		
		Total Credit Hours	15		

Second Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 106-106L	Chemistry Survey and Lab (SGR #6)	p. MATH placement	4	F/S	
ENGL 277	Technical Writing in Engineering (SGR #1)	p. GE 101, AST 119, PHYS 119, or PS 119, and ENGL 101 or instructor consent	3	F/S	
AST 342-342L	Applied Electricity & Lab		3	F/S	
PS 223-223L*	Principals of Plant Pathology and Lab	p. BIOL 103/L or 153/L or BOT 201/L	3	F/S	
STAT 281	Introduction to Statistics (SGR #5)	p. MATH 103 or higher	3	F/S/SU	
		Total Credit Hours	16		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ABS 203	Global Food Systems (SGR #3)		3		
ACCT 210* or AGEC 271* or AGEC 354*	Principles of Accounting I Farm and Ranch Management Agricultural Marketing and Prices	 p. MATH 103 or higher p. ECON 201 or ECON 202	3	F/S/SU F/S/SU F/S/SU	
AST 273	Agricultural Computer Applications		3	F/S	
CHEM 120-120L	Elementary Organic Chemistry and Lab	p. CHEM 106/L or CHEM 112/L	3	S	
PS 213-213L*	Soils and Lab (SGR #6)	p. CHEM 106/L or CHEM 112/L	3	F/S	
		Total Credit Hours	15		

*Students must earn at least a C grade in each major required class and must earn at least a 2.5 cumulative GPA in the major required classes.

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
AST 390* or PS 490 *	Seminar	p. PS 494	1	F S	
PHYS 101-101L	Survey of Physics and Lab (SGR #6)		4	F/S	
PRAG 340*	Climate Risk Management with Precision Agriculture		3	F	
PRAG 423*	Soil Fertility and Plant Nutrient Management	p. PS 213/L	3	F/S	
PRAG 426*	Corn Production	p. Jr. or Sr. Standing; Select 2 courses from: 424 (Sp Odd), 425 (Sp Even), or 426 (Fall)	2	F	
PRAG 427*	Precision Ag Data Mapping	p. Jr. Standing	2	F/S	
		Total Credit Hours	15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
AST 313-313L*	Farm Machinery Systems Management and Lab	p. PHYS 101 or PHYS 111	3	S	
PRAG 345*	Principles and Implications of Chemical Application Systems		3	S	
PRAG 424* and/or PRAG 425*	Wheat Production and/or Soybean Production	p. Jr. or Sr. standing; Select 2 courses from: 424 (Sp Odd), 425 (Sp Even), or 426 (Fall)	2	S	
PS 405-405L or PS 407-407L*	Entomology and Lab or Insect Pest Management and Lab	p. BIOL 151/L "C" or higher	3	F S	
STAT 383*	Geospatial Data Analysis	p. MATH 114 or STAT 381 or STAT 382	3	S	
		Total Credit Hours	14		

Summer

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
AST 494* or PS 494*	Internship	p. Written consent	1		
		Total Credit Hours	1		

Fourth Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ABS 475	Integrated Natural Resource Management	p. Senior standing; preferred section is Fall only	3	F	
AST 412-412L*	Fluid Power Technology and Lab		3	F	
AST 426-426L* or PRAG 428*	Technology Applications for Precision Agriculture and lab or Use of Soil and Plant Sensors in Crop Production		3	F F	
PRAG 440-440L*	Crop Management with Precision Farming and Lab	p. PRAG 427	3	F/S	
PS 445-445L*	Weed Science and Lab	p. PS 103/L or HO 111/L; and CHEM 108/L or 120/L or 326/L	3	F	
		Total Credit Hours	15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
AST 333-333L	Soil and Water Mechanics & Lab		3	**F/S**	
PRAG 304-304L*	Electrical Diagnostics for Farm Machinery and Lab	p. AST 342/L or ET 210/L	3	S	
PRAG 410-410L* or PS 462-462L*	Soil Geography and Land Use Interpretation and Lab or Environmental Soil Management and Lab	p. GEOG 132/L or PS 213/L; PRAG 410/L Cross-Listed with GEOG 410/L p. PS 213/L	3	F/S S	
Electives	As needed to reach 120 total credits		4		
		Total Credit Hours	13		

Comments/Notes

*Students must earn at least a C grade in each major required class and must earn at least a 2.5 cumulative GPA in the major required classes.

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

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