SOUTH DAKOTA STATE UNIVERSITY

Bachelor of Science
Major: Precision Agriculture
Emphasis: Select from: Machinery Systems, Cropping Systems, Data & Analytics
2024-2025 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/Interest	

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 requirements, 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	p. BIOL 101 or BIOL 151	3	S	
ECON 201	Principles of Microeconomics (SGR #3)		3	F/S/SU	
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. ENGL 101	3	F/S	
AST 342-342L*	Applied Electricity & Lab		3	F/S	
Emphasis Electives	Select 21 credits from one of the emphasis areas - Machinery Systems, Cropping Systems, or Data & Analytics emphasis		3	F/S	
STAT 281*	Introduction to Statistics	p. MATH 114 or higher	3	F/S/SU	
		Total Credit Hours	16		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
SGR #3	Social Sciences (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 114 or higher p. ECON 201	3	F/S/SU F/S/SU F/S/SU	
AST 273*	Agricultural Computer Applications		3	F/S	
CHEM 120-120L or PHYS 101-101L or Emphasis Electives	Elementary Organic Chemistry & Lab or Survey of Physics & Lab or Data & Analytics Emphasis credits	p. CHEM 106/L or CHEM 112/L. Select PHYS if Machinery Systems, CHEM if Cropping Systems Emphasis, emphasis elective if Data & Analytics Emphasis	3-4	S F/S	
PS 213-213L*	Soils and Lab	p. CHEM 106/L or CHEM 112/L	3	F/S	
		Total Credit Hours	15-16		

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
AST 390* or PS 490 *	Seminar	p. PS 494	1	F F/S	
PRAG 428*	Use of Soil & Plant Sensors in Crop Production		3	F	
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. PS 103 and PS 213; 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	14		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
Emphasis Electives	Select 21 credits from one of the emphasis areas - Machinery Systems, Cropping Systems, or Data & Analytics emphasis		6	F/S	
PRAG 285*	Agricultural Computations		2	F/S	
PRAG 424* and/or PRAG 425*	Wheat Production and/or Soybean Production	p. PS 103 and PS 213; Jr. or Sr. Standing; Select 2 courses from: 424 (Sp Odd), 425 (Sp Even), or 426 (Fall)	2	S	
STAT 383*	Geospatial Data Analysis	p. MATH 114 or STAT 281	3	S	
		Total Credit Hours	13		

Summer

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

FOURTH YEAR

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
AST 412-412L*	Fluid Power Technology and Lab		3	F	
AST 426-426L*	Technology Applications for Precision Agriculture and Lab		3	F	
PRAG 440-440L*	Crop Management with Precision Farming and Lab	p. PRAG 427	3	F/S	
PRAG 475	Senior Capstone	p. PRAG 285 or AST 273 and STAT 281 and STAT 383; Senior standing	3	F	
Emphasis Electives	Select 21 credits from one of the emphasis areas - Machinery Systems, Cropping Systems, or Data & Analytics emphasis		3	F/S	
		Total Credit Hours	15		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
Emphasis Electives	Select 21 credits from one of the emphasis areas - Machinery Systems, Cropping Systems, or Data & Analytics emphasis		3	F/S	
Emphasis Electives	Select 21 credits from one of the emphasis areas - Machinery Systems, Cropping Systems, or Data & Analytics emphasis		2-3	F/S	
PRAG 304-304L*	Electrical Diagnostics for Farm Machinery and Lab	p. AST 342/L or ET 210/L	3	S	
Electives	As needed to reach 120 total credits		6		
		Total Credit Hours	14-15		

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