Precision Agriculture

Department Information

- **Department Phone:**
  701-231-7261
- **Department Email:**
  ndsu.aben@ndsu.edu
- **Department Web Site:**
  www.ndsu.edu/aben/
- **Degrees Offered:**
  B.S.

Major Requirements

Major: Precision Agriculture

Degree Type: Bachelor of Science (B.S.)
Minimum Degree Credits to Graduate: 120

University Degree Requirements

1. Satisfactory completion of all requirements of the curriculum in which one is enrolled.
2. Earn a minimum total of 120 credits in approved coursework. Some academic programs exceed this minimum.
3. Satisfactory completion of the general education requirements as specific by the university.
4. A minimum institutional GPA of 2.00 based on work taken at NDSU.
5. At least 36 credits presented for graduation must be in courses number 300 or higher.
6. Transfer Students: Must earn a minimum of 60 credits from a baccalaureate-degree granting or professional institituion.
   a. Of these 60, at least 36 must be NDSU residence credits as defined in #7.
   b. Within the 36 resident credits, a minimum of 15 must be in courses numbered 300 or higher and 15 credits in the major field of study.
7. At least 36 credits must be NDSU resident credits. Residence credits include credits registered and paid for at NDSU.

For complete information, please refer to the Degree and Graduation Requirements (http://bulletin.ndsu.edu/past-bulletin-archive/2018-19/academic-policies/undergraduate-policies/degree-and-graduation) section of this Bulletin.

University General Education Requirements

Code	Title	Credits
Communication (C)		12
ENGL 110	College Composition I	
ENGL 120	College Composition II	
COMM 110	Fundamentals of Public Speaking	
Upper Division Writing †		
Quantitative Reasoning (R) †		3
Science and Technology (S) †		10
Humanities and Fine Arts (A) †		6
Social and Behavioral Sciences (B) †		6
Wellness (W) †		2
Cultural Diversity (D) *†		
Global Perspectives (G) *†		
Total Credits		39

* May be satisfied by completing courses in another General Education category.

† General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review major requirements to determine if specific courses can also satisfy these general education categories.

- A list of university approved general education courses and administrative policies are available here (http://bulletin.ndsu.edu/past-bulletin-archive/2018-19/academic-policies/undergraduate-policies/general-education/#genedcoursestext).

Code	Title	Credits
Major Requirements		
AGEC 242	Introduction to Agricultural Management	3
ASM 225	Computer Applications in Agricultural Systems Management	3
ASM 354	Electricity and Electronic Applications	3
ASM 378	Machinery Principles and Management	3
ASM 454	Principles and Application of Precision Agriculture	3
ASM 491	Seminar	1
CHEM 121	General Chemistry I	3
CHEM 121L	General Chemistry I Laboratory	1
GEOG 105	Fundamentals of Geographic Information Systems	3
GEOG 470	Remote Sensing	3
MATH 103	College Algebra	3
MATH 105	Trigonometry	3
PAG 115	Introduction to Precision A	3
PAG 215	Mapping of Precision Ag Data	3
PAG 315	Electronic Systems in Preci	3
PAG 455	Big Data Management in Precision Agriculture	3
PAG 475	Precision Ag Systems Capst	2
PAG 496	Precision Ag Tech Expo	1
PAG 496	Internship	1
PLSC 110	World Food Crops	3
PLSC 225	Principles of Crop Production	3
PPTH 324	Introductory Plant Pathology	3
SOIL 210	Introduction to Soil Science	3
SOIL 322	Soil Fertility and Fertilizers	3
STAT 330	Introductory Statistics	3
Precision Ag Major requires an additional 18 credits of elective credits. Choose from those listed below, or consult your advisor for additional options.		18
AGEC 342	Farm and Agribusiness Management II	
AGEC 350	Agrisales	
ASM 264	Natural Resource Management Systems	
ASM 373	Tractors & Power Units	
ASM 374	Power Units Laboratory	
ASM 429	Hydraulic Power Principles and Applications	
CSCI 479	Introduction to Data Mining	
GEOG 455	Introduction to Geographic Information Systems	
GEOG 456	Advanced Geographic Information Systems	
GEOG 480	Geographic Information Systems Pattern Analysis and Modeling	
ME 311	Introduction To Aviation	
ME 312	Introduction to Flight	
ME 313	Commercial Instrument Ground School	
NRM 420	Sustainable Scenarios in Natural Resources Management	
PLSC 215	Weed Identification	
PLSC 323	Principles of Weed Science	
PPTH 455	Plant Disease Management	
SOIL 217	Introduction to Meteorology & Climatology	
SOIL 410	Soils and Land Use	

SOIL 447	Microclimatology	
Total Credits		84

Minor Requirements

Precision Agriculture

Minor Requirements

Required Credits: 18

Code	Title	Credits
Precision Ag Minor Courses - Select 3 courses from the following:		9
ASM 454	Principles and Application of Precision Agriculture	
PAG 215 Mapping of Precision Ag Data		
PAG 315 Electronic Systems in Pre		
PAG 455 Big Data Management in Precision Agriculture		
Precision Ag Minor Required Course		1
PAG 496 Internship	(or similar department course)	
Precision Ag Minor Elective Courses - Select 3 courses from the following:		8
AGEC 342	Farm and Agribusiness Management II	
ASM 264	Natural Resource Management Systems	
ASM 354	Electricity and Electronic Applications	
ASM 378	Machinery Principles and Management	
CSCI 479	Introduction to Data Mining	
GEOG 455	Introduction to Geographic Information Systems	
GEOG 456	Advanced Geographic Information Systems	
GEOG 470	Remote Sensing	
ME 313	Commercial Instrument Ground School	
PAG 475 Precision Ag Systems Cap		
PLSC 225	Principles of Crop Production	
NRM 453	Rangeland Resource/Watershed Management	
SOIL 322	Soil Fertility and Fertilizers	
Total Credits		18