

PRECISION AGRICULTURE

Students in the Precision Agriculture program will develop technical skills and learn to interpret, analyze, and utilize data gathered from precision agriculture technologies to improve production. Graduates will be skilled and competent to work as technicians and producers in a rapidly changing industry that is concerned with maximizing yield potential through resource efficient practices. A key component of this program is to deepen students' understanding of the intricacies that exist between agriculture and our natural resources. Upon completion of this program, students will be able to:

- Demonstrate fundamental knowledge of agronomic principles that guide effective decision-making in soil, plant, and water management.
- Discuss and utilize multiple agriculture GIS programs in a precision agriculture environment.
- Apply principles of data-based decision making to improve agricultural operations and outcomes.
- Demonstrate knowledge and skills in the proper collection of data with careful attention to ensuring data accuracy.
- Identify and explain guidance systems, data collection tools, and variable rate application systems and how they work with each other.
- Demonstrate proper calibration methods and discuss the theory behind calibrations.

Required Program of Study for Associate of Applied Science Degree (2 years)

FRESHMAN YEAR

First Semester	
Course	Credits
AGRI 1030 Soil Science	3
AGRI 1040 Soil Science Lab	1
ENGL 1050 Workplace Communication*	3
AGRI 1500 Microcomputer Applications in Agriculture*	3
AGRI 1540 Precision Irrigation Management	3
AGRI 1005 Precision Agriculture Systems	3
AGRI 1105 Issues in Agriculture I	1
	<u>17</u>

Second Semester	
Course	Credits
AGRI 2510 Ag GIS Fundamentals	3
AGRI 1131 Plant Science	3
AGRI 1132 Plant Science Lab	1
AGRI 1400 Farm and Environmental Safety	2
AGRI 1410 Introduction to the Economics of Agriculture*	3
MATH 2170 Applied Statistics*	3
	<u>15</u>

Internship Options***	
Course	Credits
Select one of the following options:	3-4
AGRI 2020 Crops and Irrigation (<i>summer</i>),	3
AGRI 1115 Issues in Agriculture II & (<i>pre-requisite to AGRI 2115 must be taken in proceeding semester</i>)	
AGRI 2115 Global Opportunities in Agricultural Leadership (<i>International travel</i>),	4
AGRI 2040 Livestock Production I (<i>summer</i>), OR	3
AGRI 1300 Cooperative Internship I	3

SOPHOMORE YEAR

First Semester	
Course	Credits
AGRI 1520 Intro to Ag Electronics & Hydraulics	3
AGRI 1525 Intro to Ag Electronics & Hydraulics Lab ...	1
AGRI 2015 Farm and Ranch Management	4
AGRI 2200 Advanced Fertilizers	2
AGRI 2500 Data Collection Methodologies	3
Elective(s)**	2
	<u>15</u>

Second Semester	
Course	Credits
AGRI 2005 Precision Agriculture Theory	3
AGRI 2520 Ag GPS Applications	3
AGRI 2525 Ag GPS Applications Lab	1
AGRI 2530 Precision Hardware	3
AGRI 2535 Precision Hardware Lab	1
AGRI 1420 Interpersonal Skills*	3
Elective(s)**	2
AGRI 2890 Agriculture Capstone Experience	1
	<u>17</u>

Total Credit Hours **67-68**

*Course fulfills a general education requirement for Northeast Community College. See General Education Requirements.

**A total of 4 elective credits must be taken. They can be taken as a combination of 1, 2, 3, or 4 credit courses in agriculture, science, BRDC 1600 Drone Operations + BRDC 1610 Drone Operations Lab, DESL 1000 Basical CDL Driver Training + DESL 1005 Basic CDL Driver Training Lab – contact your advisor to determine which courses will work best.

***See your advisor to determine which option works best.

The Northeast Community College agriculture program has articulation agreements with the University of Nebraska-Lincoln, Wayne State College, South Dakota State University, and Northwest Missouri State. If interested in more information, contact your advisor.