AG - PRECISION AG (AGP)

AGP-143 Fundamentals of Electricity for GPS (1)
Introduces basic electricity fundamentals, such as voltage, amperage and resistance, with an emphasis on Ohm's Law and its practical application. Covers operation and understanding of a digital volt/ohm meter, and series and parallel circuits. Arts & Sciences Elective Code: B
Hours per week: 2.0 lab

AGP-333 Precision Farming Systems (3)
Provides an overview of precision farming concepts and the tools of precision farming (GPS, GIS and VRT). Introduces the use of each of these tools within the processes of a precision farming system. Provides hands-on activities in the use of these tools. Discusses economic and environmental benefits. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGP-405 Ag Applications of GIS (3)
Provides an overview of the various applications of geographic information systems (GIS). Covers basic interface, views, themes, tables and layouts using ARCView software. Previews basic functions such as query and editing layers. Provides practical experience with hands-on computer exercises in several disciplines, including agriculture, city/government planning or transportation. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

AGP-420 Geospatial Data Collection (3)
Provides detailed instruction and hands-on use of GPS receivers and dataloggers to collect field data. The process for creating spatial data structure, maintenance of equipment and use of datalogging software is the main focus. Data management and evaluation are also covered. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGP-333.

AGP-425 Agricultural Spatial Analysis (3)
Provides a background in the analysis of spatial data. Specific topics include transformation and retrieval of data, analytical techniques and spatial modeling. Concepts of multivariate and multitemporal analysis are also discussed. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGP-405.

AGP-435 Advanced Precision Farming: Software (3)
Introduces various precision farming software in real-world applications. Focuses on initial setup, creating management and production lists, saving and unloading data cards, processing field data, and compiling reports and prescription/application maps. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGP-333.

AGP-437 Precision Ag Hardware (Machinery Servicing & Retrofitting) (1)
Prepares the student to use various precision farming hardware components. Requires students to read and understand technical manuals for the updating and retrofitting of agricultural machinery with new technology and monitoring systems. Focuses on preparing a planter assembly for field operation in the spring by installing necessary technology upgrades, and control and guidance systems. Arts & Sciences Elective Code: B
Hours per week: 2.0 lab

Prerequisite: Take AGP-333.

AGP-439 Ag Hardware, Maintenance and Technology (3)
Emphasizes various farming hardware components. Incorporates technical manuals for the updating, retrofitting and maintenance of agricultural machinery with new technologies. Offers hands-on planter assembly and updating for planting season field operation, and tractor preparation upgrades for the control and guidance systems. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab

Prerequisite: Take AGP-333.

AGP-440 Ag Applications of Digital Imagery (3)
Provides background in the use of remotely sensed digital imagery for agricultural decision making. Specific topics include types of images, methods of collecting imagery, verification, interpretation and analysis of data. Use of data for decision making is also discussed. Arts & Sciences Elective Code: B
Hours per week: 2.0 lecture, 2.0 lab