Precision Agriculture (PAG)

PAG 115. Introduction to Precision Agriculture. 2 Credits.
This course is designed to introduce the student to a broader view of the precision agriculture, crop and livestock production in precision agriculture, fundamental concepts of GIS, GPS, sensors, drones, data acquisition and management, Remote sensing. The course is offered in 2 fifty mins lectures per week. Co-req: MATH 103.

PAG 115L. Introduction to Precision Agriculture Lab. 1 Credit.
This laboratory course is designed to teach students Precision Ag hands on experiences include drone flying, precision ag mapping, field visit and ag robotic demonstration. Co-req: PAG 115.

PAG 191. Seminar. 1-5 Credits.

PAG 215. Mapping of Precision Ag Data. 3 Credits.
The course is designed to introduce students to currently technologies and software solutions being used for data collection, storage, and analysis to support more informed crop management decisions. The course is offered as two 50-minute lectures and one 2-hour lab per week. Prereq: PAG 115.

PAG 291. Seminar. 1-5 Credits.
Seminar.

PAG 315. Electronic Systems in Precision Ag. 3 Credits.
This course is designed to introduce the student to understand the basics of electronic systems and applications in precision ag. The students will learn topics like signal processing, electric motor, serial control and communications data network for tractors and machinery for agriculture applications. The course is offered in two 50 mins lectures and one 100 mins laboratory per week. Prereq: PAG 215 and PHYS 120.

PAG 348. Agricultural Technology Exposition. 1 Credit.
This course provides understanding of showing and explaining the latest innovations in agricultural technology. Students practice good communication skills and learn task management for completion of a project. Higher level thinking skills are used and demonstrated through preparing displays for public viewing and interaction. Cross-listed with ASM.

PAG 394. Individual Study. 1-5 Credits.

PAG 454. Applications of Precision Agriculture. 3 Credits.
The course is designed to introduce students to current technologies that are being used for crop production, and how to use the data collected by them to make more informed crop management decisions. The course is offered as two 50-minute lectures and one lab meeting per week. Prereq: PAG 215. {Also offered for graduate credit - See PAG 654.}.

PAG 455. Applications of Big Data in Precision Agriculture. 3 Credits.
The course is designed to introduce students to basics concepts regarding big data, how big data relates to precision agriculture, and how big data analysis approaches are using precision agriculture related data to enhance crop management and production. The course is offered as two 50-minute lectures and a 2.5 hour lab per week. Prereq: PAG 454.

PAG 475. Precision Ag Systems Capstone. 2 Credits.
Capstone learning experience involving team solutions to relevant problems in precision agriculture, which involves project planning and execution, including technical communication, budgeting, team management, and timelines. Emphasis will be on the team management, professionalism, communication skills, formal written report, and formal oral presentation. Prereq: PAG 315, PAG 454 and senior standing.

PAG 493. Undergraduate Research. 1-5 Credits.

PAG 494. Individual Study. 1-5 Credits.

PAG 496. Field Experience/Practicum. 1-15 Credits.

PAG 654. Applications of Precision Agriculture. 3 Credits.
The course is designed to introduce students to current technologies that are being used for crop production, and how to use the data collected by them to make more informed crop management decisions. The course is offered as two 50-minute lectures and one lab meeting per week. {Also offered for undergraduate credit - See PAG 454.}.

PAG 690. Seminar. 1-5 Credits.

PAG 794. Practicum/Internship. 1-8 Credits.

PAG 795. Field Experience. 1-15 Credits.