

SOUTHEAST COMMUNITY COLLEGE
COURSE SYLLABUS
ADVANCED TECHNOLOGIES & SKILLED TRADES
Precision Agriculture
Revision Date: August 2025

I. CATALOG DESCRIPTION

Course Number: AGRI 1265
Course Title: Precision Ag Emerging Technologies
Prerequisite(s): AGRI 1171 or permission
or
Co-prerequisite:

Catalog Description: This course explores the latest advancements in precision agriculture, with an emphasis on the use of spray drones. Students will get an in depth look into the laws, regulations and operating procedures of spray drones used for both wet and dry product application. The course will also place an emphasis on variable rate irrigation and how it can revolutionize irrigation practices.

Credit Hours: 2.0
Class Hours: 23
Lab Hours: 23
Total Contact Hours: Total Class + Lab Hours 46

II. COURSE OBJECTIVES: *Course will:*

- A. Expose students to the spray drone industry and its various facets
- B. Walk students through the process of getting a spray drone fully registered and licensed
- C. Educate students on the material needed to obtain a remote pilot certification
- D. Expose students to the science of variable rate irrigation and its components
- E. Introduce students to writing a variable rate irrigation prescription

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *Student will be able to:*

- a. Identify and explain various spray drones used in the agriculture industry
- b. Operate a spray drone both manually and in an autonomous mode
- c. Attempt the remote pilot certification exam administered by the FAA
- d. Explain the benefits and theory of variable rate irrigation systems
- e. Identify and evaluate new precision technologies as they are developed

B. GENERAL EDUCATION LEARNING OUTCOMES

GELO #3: Critical Thinking & Problem Solving

Critical thinkers have the ability to evaluate a problem or assumption and determine an appropriate course of action. They use reason and evidence to make judgments and decisions. Critical thinking and problem-solving skills rank highly among employer expectations.

Outcomes:

1. Synthesize information to arrive at reasoned solutions to problems.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

- A. Drone laws & regulations
- B. Spray drone operation & best practices
- C. Variable Rate Irrigation principles
- D. VRI prescriptions
- E. Precision Ag new advancements

V. INSTRUCTIONAL MATERIALS

- A. **Required Text(s):** No Required Text
- B. **Other Resources:**

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation typically include a combination of the following:
 1. Presentation methods will include, but not limited to demonstrations, practice activities to develop proficiency and over the shoulder supervision and instruction.
 2. Laboratory assignments and projects designed to develop design and problem-solving skills

VII. METHODS OF EVALUATION

- A. Methods of evaluation typically include a combination of the following:
 - a. Successful completion of daily projects
 - b. Quizzes, papers, etc.
 - c. Practical Exams

SCC STANDARD GRADING SCALE POLICY:

A+ 95-100	C+ 75-79
A 90-94	C 70-74
B+ 85-89	D+ 65-69
B 80-84	D 60-64
	F Below 60

VIII. SPECIFIC COURSE REQUIREMENTS:

- A. Successful completion of daily projects designed to develop specific skills which build upon one another
- B. Successful mastery of lab skills is essential in this class
- C. Students are responsible for backing up their own files onto their network drive and maintaining security.