

SOUTHEAST COMMUNITY COLLEGE
COURSE SYLLABUS
TRAN-WELDING-AG
Agriculture Management & Production Program
Revision Date: August 2023

I. CATALOG DESCRIPTION

Course Number: **AGRI 2280**
Course Title Advanced Crop Production
Prerequisite(s): AGRI 1135, AGRI 1131 and AGRI 1153

Catalog Description: Study of crop production, including the major elements of growth and development, seed formation, fertilization, insect and disease control of crops grown on the High Plains.

Credit Hours: 3.0
Class Hours: 45
Lab Hours: -
Total Contact Hours: Total of Class + Lab Hours 45

II. COURSE OBJECTIVES: *Course will:*

1. Discuss different growth stages of crop development of major crops.
2. Discuss and explain the major crop management practices that occur during each stage of major crops.
3. Discuss, explain, and demonstrate proper scouting methodology for agronomic crops.
4. Identify potential agronomic situations including nutrient deficiencies and insect, disease and weed pressure.
5. Discuss both preventative and possible corrective measures for nutrient deficiencies and insect, disease and weed pressures using an integrated crop management approach.
6. Discuss economic calculations for agronomic decisions on preventative and corrective measures.
7. Discuss cropping systems and soil and water conservation management practices.
8. Introduce and identify proper communication pathways for customer interaction.
9. Utilize current global positioning mapping software and technology as tools to develop agronomic recommendations.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

Student will be able to:

1. Identify the different growth stages of crop development of major crops and understand.

2. Discuss and explain the major crop management practices that occur during each stage of major crops.
3. Demonstrate proper scouting methods by completing weekly scouting trips.
4. Identify nutrient deficiencies, diseases, insects and weeds in major crops.
5. Determine and recommend both preventative and possible corrective measures for nutrient deficiencies and insect, disease and weed pressures using an integrated crop management approach.
6. Calculate the economic impact of critical cropping decisions for nutrient and pest management.
7. Discuss, evaluate, and determine how cropping systems and soil and water conservation management practices fit into regional management of major crops.
8. Demonstrate his or her writing and speaking skills by developing and presenting scouting reports.
9. Identify the technology tools available for agronomy, and implement the technology tools into current scouting trips.

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) Collect, identify, interpret and analyze data.

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

- A.** Crop growth and development as it relates to environment and production practices
- B.** Cropping systems
- C.** Adaptation of global positioning mapping to modern production and GPS data management
- D.** Nutrient Uptake and Use
- E.** Diseases and Insects of the high plains and their prevention/control

V. INSTRUCTIONAL MATERIALS

A. Required Text(s): Soybean Growth and Development (PM 1945), Corn Growth and Development (PMR 1009), Corn Diseases (IPM1001), Soybean Diseases (IPM1002), & Field Crop Insects (CSI 0014)

B. Other Resources: Safety glasses, pocket knife, and calculator.

VI. METHODS OF PRESENTATION/INSTRUCTION

Methods of presentation typically include a combination of the following:

Lecture, laboratory assignments and tasks, slide and video presentations, research and writing assignments, field trips, and guest lectures and speakers.

VII. METHODS OF EVALUATION

Methods of evaluation typically include a combination of the following:

- A.** Quizzes and exams
- B.** Crop, disease and insect research/ writing assignments
- C.** Presentations
- D.** Daily in-class evaluations
- E.** Professionalism in the classroom
- F.** Weekly scouting reports

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 all exams, projects, and assignments
- B.** Properly and safely operating SCC tractors and equipment
- C.** Utilizing proper safety eyewear at all times during lab activities