

SOUTHEAST COMMUNITY COLLEGE
COURSE SYLLABUS
TRAN-WELDING-AG
Agriculture Management & Production Program
Revision Date: August 2020
[Syllabus Statements](#)

I. CATALOG DESCRIPTION

Course Number: **AGRI 2220**
Course Title Ag Chemicals & Equipment Application
Prerequisite(s): AGRI 1153

Catalog Description: Intensive study of insects, diseases, and weed identification and control. Study and application of herbicides, insecticides, fungicides, and fertilizers with emphasis on safety, toxicity, dangers, chemicals, formulation and application procedures. Operational maintenance and application experience with various types of equipment with emphasis on chemical and fertilizer application equipment.

Credit Hours: 4.0
Class Hours: 45
Lab Hours: 45
Total Contact Hours: Total of Class + Lab Hours 90

II. COURSE OBJECTIVES: *Course will:*

1. Explain the Integrated Pest Management System.
2. Demonstrate the different uses and techniques of pesticides.
3. Identify how to properly calibrate equipment.
4. Demonstrate the correct application procedures for spraying pesticides.
5. Explain the economic impact of pests and pest control
6. Identify common crop pests.
7. Identify components of pesticide spraying equipment.
8. Demonstrate proper pesticide selection.
9. Explain proper methods of pesticide resistance management.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING

OUTCOMES:

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

1. Discuss, explain, and implement an integrated crop pest management system.
2. Demonstrate his or her research and writing skills by developing one topic relating to pest management systems.
3. Distinguish, discuss, and explain the use of pesticides correctly and judiciously.
4. Distinguish, discuss, and explain the use of spray adjuvants, pesticides and application methods for various situations.
5. Identify pests including weeds, insects and diseases.
6. Understand the impact of pest on crop rotation.
7. Understand factors affecting pest control.
8. Demonstrate ability to select correct pesticides for given pests, crops and situations.
9. Gain an understanding of safe practices for handling pesticides and operating application equipment.

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. Identification of weeds, insects, diseases, and an integrated pest management system approach to their prevention and control.
- B. Pesticide resistance management strategies.
- C. Calibration, nozzle types, spray patterns, rate controllers, and variable-rate application.
- D. Blending, spray adjuvants, water quality, carriers
- E. An IPM approach in selecting control methods—herbicides, insecticides, fungicides, and various other strategies.
- F. Application equipment, safety protocols, application techniques

V. INSTRUCTIONAL MATERIALS

A. Required Text(s): UNL Guide for Weed, Disease, & Insect Mgt (EC130)

B. Other Resources: Safety glasses, calculator, proper PPE including long-sleeve shirt, long pants, shoes, and socks.

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.** Indoor and outdoor lab exercises
- C.** Daily assignments
- D.** Daily evaluation of participation
- E.** "Bullet Point" topic papers
- F.** Daily evaluation of professionalism

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.** b. Properly and safely operating SCC equipment.
- C.** c. Utilizing proper safety eyewear and clothing at all times in class activities.