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

I. CATALOG DESCRIPTION

Course Number: **AGRI 2265**
Course Title Irrigation and Water Management
Prerequisite(s): AGRI 1153

Catalog Description: Principles of irrigation, soil, water and plant relationships, and operation of irrigation equipment. Irrigation scheduling, chemigation, and management of water to prevent erosion and maintain surface and groundwater quality.

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. Introduce irrigation safety practices
2. Introduce soil, plant, water relationship
3. Introduce sprinkler irrigation
4. Introduce gravity irrigation
5. Introduce drip irrigation
6. Introduce surface and ground water protection methods
7. Introduce state and federal water regulations
8. Introduce variable rate irrigation
9. Introduce soil water monitoring
10. Introduce irrigation scheduling
11. Provide hands on application of irrigation equipment
12. Introduce irrigation economics

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

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

1. Develop an understanding of soil, water, plant relationship.
2. Develop an understanding of irrigation safety practices.
3. Learn to apply irrigation water while protecting surface and groundwater sources.
4. Practice water management through soil moisture and monitoring.
5. Develop an understanding of irrigation scheduling
6. Develop an understanding of proper sprinkler irrigation operation

7. Develop an understanding of proper gravity irrigation operation
8. Develop an understanding of proper drip irrigation operation
9. Develop an understanding of surface and ground water protection methods
10. Develop an understanding of proper utilization of emerging irrigation technology
11. Practice sound economic decision making
12. Develop an understanding of proper utilization of chemigation 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) Collect, identify, interpret and analyze data.
2) Synthesize information to arrive at reasoned solutions to problems.

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

a. Introduction to Irrigation and Water Management
b. Safety in irrigation
c. Determining whether or not to irrigate
d. Water Requirements and Sources
e. Effects of water quality
f. Types of irrigation systems
g. Irrigation wells
h. Soil Water Relationships
i. Chemigation and Fertiligation
j. Cost returns from irrigation
k. Scheduling irrigation
l. Equipment maintenance and design

V. INSTRUCTIONAL MATERIALS

A. Required Text(s):): PLANNING FOR AN IRRIGATION SYSTEM ISBN# 0-91452-44.4

B. Other Resources:

Approved safety glasses, calculator, protective clothing, pliers or vise grips

VI. METHODS OF PRESENTATION/INSTRUCTION

Methods of presentation typically include a combination of the following:

a. Lecture, laboratory assignment and tasks, slide and video presentations, research and writing assignments, field trips, and guest lectures and speakers.
b. Lab Activities

VII. METHODS OF EVALUATION

Methods of evaluation typically include a combination of the following:

a. Quizzes, tests, and exams
b. Skills project and exam
c. Research project
d. Grading and attendance will be in accordance with the SCC policies located in the student handbook.

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 operate all college tractors and equipment.
c. Utilize proper safety eyewear at all times in lab.