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

I. CATALOG DESCRIPTION

Course Number: AGRI 1378
Course Title Electrical and Hydraulic Fundamentals
Prerequisite(s):

Catalog Description: The study of how electricity and hydraulic systems integrate into agriculture.

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

II. COURSE OBJECTIVES: *Course will:*

1. Explain the fundamentals of electricity
2. Instruct the students on components and tools relating to electricity
3. Explain the fundamentals of hydraulic systems
4. Instruct the students on hydraulic components and capabilities

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

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

a. Identify, repair, and replace electrical components
b. Build a simple electrical circuit
c. Understand the different hydraulic systems
d. Understand the applications of hydraulics in relation to agriculture

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. Understand the fundamentals and safety aspects of electricity
B. Understand electrical componentry

C. Identifying the different types of hydraulic systems
D. Understand the uses and safety aspects of hydraulic systems

V. INSTRUCTIONAL MATERIALS

A. Required Text(s): No Required Test

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

Methods of evaluation typically include a combination of the following:

A. Successful completion of daily projects and maps
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.