



South Central College

AGME 2863 Adv Ag Electrical

Common Course Outline

Course Information

Description	This course covers theory and operation of lighting, warning, accessory, cooling, steering, shifting, and hitch control circuits. Monitoring and control circuits found on planters and combines are included. Testing procedures are performed using industry accepted testers
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Total Credits	2
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Total Hours	64
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Types of Instruction

Instruction Type

On-Campus Lab

Credits/Hours

Pre/Corequisites

Prerequisites: AGME861

Course Outcomes

1. Identify agricultural electrical system types

Learning Objectives

- Interpret older and newer style wiring diagrams
- Locate circuit types
- Describe various relay types/applications
- Identify switch types/applications
- Describe planter monitors
- Describe grain loss monitor
- Describe electronic digital circuits

2. Identify switch types/applications

Learning Objectives

- Diagram lighting systems
- Diagram electrical shifting control
- Diagram electronic hitch control
- Describe potentiometer height control
- Diagram electronic steering

3. Perform on-unit diagnostic procedures

Learning Objectives

Perform digital multimeter tests
Operate generator/alternator test bench
Describe electronic steering
Test accessory circuits
Test cranking circuit
Test charging circuit

4. Interpret diagnostic test results**Learning Objectives**

Identify various alternator brands' testing terminals
Perform charging/cranking tester hookup
Measure cranking circuit voltage drop
Test lighting circuit
Perform consumer product charging circuit tests
Describe product safety testing

5. Perform off-unit component diagnostic tests**Learning Objectives**

Operate alternator, starters test stand
Use mutimeter along with service information to determine component reuse

6. Safety**Learning Objectives**

Describe various cranking safety circuits
Apply safe practices for testing procedures
Apply safe battery handling procedures

SCC Accessibility Statement

Disability Services provides accommodations and other supports to students with permanent and temporary disabilities that affect their SCC experience. Disabilities may include mental health (anxiety, depression, PTSD), ADHD, learning disabilities, chronic health conditions (migraine, fibromyalgia), sensory disabilities, and temporary disabilities (broken arm, surgery). Common accommodations are extended test time, private room for testing, audiobooks, and sign language interpreter.

Contact us: Faribault A116 (507) 332-5847. North Mankato E112 (507) 389-7222. ds@southcentral.edu
www.southcentral.edu/disability