



South Central College

MEAG 1510 Facility Operations Maintenance

Course Outcome Summary

Course Information

Description	This course includes a detailed look at maintenance and servicing of production facilities: electrical, plumbing, and mechanical equipment. Trouble shooting of ventilation, plumbing, feed lines, curtain controls, and electric motors will be discussed. Included also in the course are practical 120/240 volt wiring, electrical safety, device selection, and installation methods that apply to workers in livestock and production facilities. This course will also cover maintenance of heaters, waste handling, and facility equipment used in livestock facilities. (Prerequisites: None)
Total Credits	3
Total Hours	64

Types of Instruction

Instruction Type	Credits/Hours
Lecture	2/32
Lab	1/32

Pre/Corequisites

None

Institutional Core Competencies

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Course Competencies

1. Explain basic wiring techniques.

Learning Objectives

- Identify standard voltages.
- Identify electrical conductors.
- Describe electrical resistance.
- Explain basic wiring diagrams.
- Identify safety procedures involved in basic wiring techniques.
- Wire various circuits.

2. Describe basic over current protection.

Learning Objectives

Describe circuit breaker usage.
Describe circuit protect devices.
Identify methods of fuse and breaker replacement.
Explain AC, DC, Amps and Ohms function of meter.

3. Describe Lock out / Tag out procedures.

Learning Objectives

Identify company procedures.
Demonstrate lock out and tag out procedure.
Practice safety rules.

4. Explain generator service maintenance.

Learning Objectives

Describe maintenance schedule.
Identify safety issues.
Operate generator backup test.

5. Demonstrate feed system maintenance.

Learning Objectives

Describe feed system types.
Describe feed system operation considerations.
Review feed system maintenance schedule.
Perform feed system repair.
Describe methods of auger system repair.

6. Demonstrate basic plumbing techniques.

Learning Objectives

Describe water system components.
Complete plumbing lab tasks.

7. Describe basic ventilation techniques.

Learning Objectives

Identify various ventilation systems.
Describe curtain control repair and maintenance.
Describe static pressure.
Perform basic ventilation system maintenance.

8. Describe fan controls and trouble shooting techniques.

Learning Objectives

Describe fan performance.
Describe fan control components.

9. Repair and maintain medicator devices.

Learning Objectives

Describe maintenance considerations.
Perform basic medicator maintenance.

10. Repair and maintain L.P. heaters.

Learning Objectives

Describe heater maintenance considerations.
Identify safety considerations.
Perform basic heater maintenance and repair tasks.

11. Describe facility waste handling concerns.

Learning Objectives

Describe facility manure handling system.
Identify facility safety considerations.

12. Describe filter maintenance procedures.

Learning Objectives

Describe filter maintenance.
Identify air leaks.

13. Explain testing meter functions.

Learning Objectives

Identify various meter devices.
Demonstrate correct meter use.

14. Describe evaporative cooling systems.

Learning Objectives

Describe effective cooling system.
Describe cool ceil maintenance considerations.

15. Perform facility trouble shooting tasks.

Learning Objectives

Identify potential trouble shooting needs.
Complete facility trouble shooting tasks.

SCC Accessibility Statement

South Central College strives to make all learning experiences as accessible as possible. If you have a disability and need accommodations for access to this class, contact the Academic Support Center to request and discuss accommodations. North Mankato: Room B-132, (507) 389-7222; Faribault: Room A-116, (507) 332-7222.

Additional information and forms can be found at: www.southcentral.edu/disability

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