



South Central College

## MEAG 1610 Ag Equipment Maintenance

### Course Outcome Summary

#### Course Information

<b>Description</b>	The course covers basic harvesting, tillage and planting equipment. The student will learn all component parts and proper adjustments of equipment. Machine adjustment will be accomplished on demonstration units, operators manual examples , actual equipment. Students will also perform several shop projects such as flaring, tap and die, chain saw sharpening, thread repair and others.
<b>Total Credits</b>	3
<b>Total Hours</b>	64

#### 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. Practice safety at all times.**

**Learning Objectives**

Wear safety glasses at all times when in the shop  
Always use jack-stands and cylinder stops when working on equipment  
Do not weld or torch near flammable materials  
Keep fire extinguishers updated on all equipment  
Make a safety checklist

**2. Describe combine harvesting operations**

**Learning Objectives**

Describe different heads used for gathering  
Describe cylinder thrashing operation  
Describe rotary thrashing operation  
Describe separating process  
Describe the cleaning process  
Describe the handling process

**3. Describe primary tillage**

### **Learning Objectives**

Describe primary tillage  
Describe moldboard plow  
Describe offset disc  
Describe disc ripper  
Describe chisel plow  
Describe subsoiler

## **4. Describe secondary tillage**

### **Learning Objectives**

Describe secondary tillage  
Describe field cultivator  
Describe tandem disc  
Describe soil conditioner  
Describe strip tillage  
Describe no-till  
Describe ridge till

## **5. Describe planting operations**

### **Learning Objectives**

Describe planter operations  
Describe finger planters  
Describe air planters  
Describe vacuum planters  
Describe importance of seed depth  
Describe importance of closing wheels  
Describe types of fertilizer applications  
Describe pesticide application  
Describe drill operation

## **6. Perform flaring**

### **Learning Objectives**

Perform tube cutting  
Perform tube preparation  
Perform flaring operation  
Perform a double flaring operation

## **7. Perform tap & die project**

### **Learning Objectives**

Perform metal preparation  
Perform pilot hole  
Perform tapping operation  
Perform thread cutting operation

## **8. Perform sharpening project**

### **Learning Objectives**

Explain tool care and repair  
Perform chisel sharpening  
Perform drill bit sharpening  
Perform chain saw sharpening  
Perform screwdriver dressing

## **9. Perform thread repair**

### **Learning Objectives**

Explain different types of thread repair  
Perform heli coil repair  
Perform keen sert repair  
Explain self tapping bolt repair

## **10. Perform transit grade project**

### **Learning Objectives**

- Explain the use of a transit
- Perform transit set up
- Perform reading transit
- Perform % of slope problem
- Perform running grade for a drain field

### **SCC Accessibility Statement**

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Additional information and forms can be found at: [www.southcentral.edu/disability](http://www.southcentral.edu/disability)

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