

# ATOE-2640: ADVANCED GRADER PRACTICE

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## Cuyahoga Community College

**Viewing: ATOE-2640 : Advanced Grader Practice**

**Board of Trustees:**

2001-03-22

**Academic Term:**

Spring 2019

**Subject Code**

ATOE - Appd Ind Tech-Operating Engin.

**Course Number:**

2640

**Title:**

Advanced Grader Practice

**Catalog Description:**

Study of standard features, standard procedures, tools, inspection, and controls of graders. Topics include attachments, terminology, inspection and controls.

**Credit Hour(s):**

3

**Lecture Hour(s):**

3

**Lab Hour(s):**

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## Requisites

**Prerequisite and Corequisite**

ATOE-1650 Graders and Plans, or ATOE-1700 Paving, Tractor, Backhoe Operations; or departmental approval.

## Outcomes

**Course Outcome(s):**

N/A

**Objective(s):**

1. Identify safety considerations for graders.
2. Conduct a normal pre-operation inspection.
3. Operate equipment using standard operation procedures.
4. Demonstrate knowledge of maintenance by troubleshooting broken equipment.
5. Discuss proper towing.

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**Methods of Evaluation:**

1. Quizzes
2. Exams
3. Classroom participation

**Course Content Outline:**

1. Safety considerations for graders
  - a. Precautionary procedures
  - b. Personal considerations
  - c. Equipment considerations

- i. rollover protective structure
    - ii. falling objects protective structure
    - iii. burn prevention
  - d. Operational considerations
- 2. Pre-Operation inspection
  - a. Equipment inspection
  - b. Hoses and fittings
  - c. Tires
  - d. Site inspections
- 3. Operate equipment
  - a. EMS functional test
  - b. Lights
  - c. Speed control
  - d. Braking
  - e. Acceleration
- 4. Maintenance
  - a. Daily maintenance
  - b. Warm up and cool down routines
  - c. Greasing
  - d. Hoses and fittings
  - e. Tires
  - f. Systems checks
    - i. electrical
    - ii. hydraulic
    - iii. braking
- 5. Transportation of equipment
  - a. Loading
  - b. Hauling
  - c. Lifting the unit

## Resources

International Union of Operating Engineers, Local #18--Apprenticeship and Training. "Training for Operating Engineers, First Year"

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International Union of Operating Engineers, Local #18--Apprenticeship and Training. "Training for Operating Engineers, Second Year, Book Two"

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International Union of Operating Engineers, Local #18--Apprenticeship and Training. "Operating Engineers, Second Year Student Workbook, Book One"

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