

ATOE-2100: MOBILE CRANE

Cuyahoga Community College

Viewing: ATOE-2100 : Mobile Crane

Board of Trustees:

2001-03-22

Academic Term:

Spring 2019

Subject Code

ATOE - Appd Ind Tech-Operating Engin.

Course Number:

2100

Title:

Mobile Crane

Catalog Description:

In-depth focus on mobile cranes. Topics include components and parts, crane signals, communications, operational safety in set-up and OSHA standards and regulations, and using load charts to calculate load weight. Also includes wire rope and rigging, and electrical hazards.

Credit Hour(s):

2

Lecture Hour(s):

2

Lab Hour(s):

0

Requisites

Prerequisite and Corequisite

ATOE-1100 Operating Engineering Concepts, or departmental approval.

Outcomes

Course Outcome(s):

N/A

Objective(s):

1. Identify components and parts of mobile cranes.
2. Demonstrate various signals for communications.
3. Explain and demonstrate how to set up the crane.
4. Discuss and demonstrate boom assembly and disassembly.
5. Explain and discuss OSHA standards and regulations.
6. Discuss operator's safety responsibilities and crane maintenance.
7. Demonstrate safety operations techniques for cranes.

Methods of Evaluation:

1. Quizzes
2. Exams
3. Classroom participation

Course Content Outline:

1. Mobile cranes
 - a. Component
 - b. Terminology
2. Crane signals and communications
3. Crane setup
 - a. Boom assembly
 - b. Hazards
4. Load charts
 - a. Calculating total load weight
 - b. PCSA rating 10-5S
 - i. cco test subjects
 - ii. crane safety inspection report
5. OSHA standards and regulations
 - a. OSHA 1926.32 {definition of competent person}
 - b. ASME/ANSI standard b 30.5
 - c. ASME/ANSI standard b 30.10
6. Crane Safety
7. Wire rope and rigging
8. Electrical hazards

Resources

Sale, Dwight B (Ed). *Crane Safety on Construction Sites/Task Committee On Crane Safety On Construction Sites*. Reston, American Society of Civil Engineers, 1998.

Verschoof, J. *Cranes: Design, Practice, and Maintenance*. London: Professional Engineering, 1999.

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