

**Prerequisites:** This course shall have no formal pre-requisite.

**Course Length:** 3-4 hours – Course length shall vary depending on the number of delegates. Total course time includes breaks.

**Class Size:** The maximum number of delegates that may be trained and tested per instructor shall be thirty-five (35) in the classroom session and twenty (20) in the practical session. A second instructor shall be added for the practical session once the participation exceeds twenty (20).

### **Course Objective**

- Provide delegates assigned to work with or around overhead cranes with the necessary skills to safely perform their jobs.
- Provide delegates with recommended practices and overhead crane regulations.
- Delegates should be able to demonstrate the necessary skills during practical examination and demonstrate knowledge during written examination.

### **Course Design**

- Power Point© / Lecture / Audio Video / Visual Aids
- Practical Exercises

### **Successful Course Completion**

- Requires a minimum score of 75% or better.
- Grades shall be calculated by dividing the number of questions answered correctly by the total number of exam questions.
- Delegates will have no more than thirty (30) minutes to complete the exam.
- Successful completion of practical session is mandatory.

### **Course Content Summary**

- Classroom
- Practicals

**Breaks:** 10 minutes (approximately every hour)

**Lunch:** 1 Hour (if applicable)

### **Course Outline**

About Overhead Cranes

- Requirements
- Types

- Video “Overhead Cranes”
- Responsibilities
  - Management
  - Employees
- Common Crane Hazards
- Overhead Crane Capacity
- Warnings
- Clearance from Obstruction
- Crane Components
  - Trolley Stops
  - Trolley Bumpers

#### Overhead Crane Inspection Requirements

- Initial
- Daily or Pre-use Inspection
- Inspection Checklist Example
- Preventative Maintenance
- Hoist Control
- Inspection Classifications
  - Frequent
  - Periodic
- Running Rope Inspection
- Rope Replacement
- Maintenance

#### Overhead Crane Operations

- General Operating Requirements
- Attaching the Load
- Moving the Load
- Hoist Safety
- Signals/Communications
  - Review Hand Signals

#### Rigging Equipment Summary

- Common Types of Slings
- Sling Inspection/Characteristics
  - Wire Rope
  - Synthetic Web
  - Polyester Round
  - Chain

#### Rigging Technique Summary

- 3 Basic Hitches
  - Vertical Leg
  - Choker
  - Vertical Basket
- Sling Lifting Capacities (Working Load Limits)

#### **Practical Session**

Practical training shall utilize an overhead crane, various slings, loads & rigging techniques.

Practical shall verify the following:

- Conduct proper pre-use inspection of crane and rigging gear
- Select the appropriate hardware/rigging gear to complete required lifts
- Effectively control the crane operations and uses operating indicators
- Accelerate and decelerate crane in a smooth safe manner
- Verify the load is not swinging prior to landing the load
- Respond to standardized hand signals from signal person
- Verify slings are properly connected/free before continuing operations
- Keep the hook clear of riggers while the slings are disconnected
- Ensure overall safety of personnel during crane operations
- Properly store hardware/rigging gear following its use

#### **Training Center Provided Material**

- PPE

#### **Delegate Requirements**

- Must possess good physical health as the practical training is physical demanding.
- Overhead Crane with Rigging Gear

#### **Reference Material / Documents**

OSHA 29 CFR 1910.179