

H S E

HEALTH

SAFETY

ENVIRONMENT



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Heavy Equipment Operation, Safety & Maintenance

Duration: 5 Days

Introduction:



Working with heavy equipments is a very dangerous task and there are several dangers associated with them. This program provides training in the operation of heavy equipment, routine maintenance of machinery and field operations of excavating, land clearing, grading and road building as well as safe operating techniques specific to each machine. It covers the operation of heavy equipment with emphasis on safety and

preventive maintenance. The information, tools, and resources provided in this course are to identify, reduce, and eliminate construction and heavy equipment related hazards.

This course is aimed at people working in road construction industry, working with heavy equipment and would hopefully improve their knowledge and practice in safety procedures of heavy equipment lifting, road work precautions and also heavy equipment preventive maintenance and troubleshooting repairs. This training also focuses on the recognition of common dangers and hazards, and ways to avoid them before they cause serious damage. This course is intended for personnel who want to learn more about heavy equipment such as cranes, derricks, hoists, trucks, elevators, and conveyors. This program conforms to OSHA 29 CFR 1926.55 and OSHA CFR 1926.1400(standard for cranes and derricks in construction).

Who Should Attend?

Heavy Equipment Forman, Supervisors, Construction Personnel, Project Engineers, HSE Staff, Mechanical Operators & Supervisors, Maintenance Personnel, construction engineers, supervisors, who want to learn more about heavy equipment operation, maintenance and safety on construction sites

Course Objectives:

By the end of this course delegates will be able to:

- Learn the OSHA regulations and standards for cranes and riggings operation
- Cover the procedures for proper inspection and maintenance
- Establish the guidelines for proper equipment testing and operation
- Outline the proper procedures for crane operators and co-workers
- Outline regulations for load handling and handling equipment
- Identify the elements of a site specific crane safety plan
- Learn best practices for crane safety on construction sites
- Become familiar with the different types of mobile cranes, hoists & rigging operations
- Define the hazards associated with heavy equipment operation
- Explore OSHA's regulations and standards
- Apply safety rules that pertain to heavy equipment operation
- Achieve a zero accident rate or have less accidents and less time loss claims
- Gain a better understanding of the potential hazards around workers

Course Outline:

- An introduction to heavy equipment
- Accidents at the workplace
- Cable avoidance equipment

- Signing lighting and guarding
- Structures and types of roads or footpaths
- Basic setting out of road works
- Excavations, backfill and reinstatement
- Basic equipment and plant used in roads industry (stop, starting and operations of plant)
- Safe operation of heavy equipment
- Daily pre-operation inspections
- Basic operations of diesel engines
- Loading, unloading and security of equipment on flatbed trailer
- Safety precautions in and around the equipment
- Basic fundamentals of hydraulics and hydraulic attachments
- Basic maintenance of equipment
- Occupational health and safety regulations
- Importance of knowing about and operating equipment safely
- Emergency first aid

- Hazards associated with crane operations
- Types of cranes
- Establishing a crane safety and lifting program
- Mobile cranes and alternate lifting methods
- Rigging awareness
- Site preparation
- Preventing crane and lifting accidents
- Types of rigging (synthetic slings: web and round)
- Wire rope: standing and running ropes, chain slings, hooks, shackles etc.,
- Inspection of rigging and safe handling of rigging
- Storage & Selection of rigging
- Working under rigging loads
- Rigging multiple items & rigging procedures
- Total loads & rigging requirements
- Communication and hand signals

- Heavy equipment maintenance and inspection
- Heavy equipment troubleshooting
- Heavy construction equipment safety
- Heavy equipment hazards identification
- Heavy equipment hazards avoidance & mitigation
- OSHA's standards for proper operation of heavy equipment
- OSHA's top six hazards related to heavy equipment
- Keeping heavy equipment work sites safe
- Safety rules that can save a life