## Mobile Crane Operations

### Operating a Crane (25 Hours)
- **Trainee $20** ISBN 978-0-13-498736-1
- **Instructor $20** ISBN 978-0-13-498737-8

(Module ID 21105-18) Describes preparations and considerations prior to lifting operations. Provides an opportunity to become familiar with the operation of a crane and the functions of its controls.

### Mobile Crane Maintenance and Inspections (25 Hours)
- **Instructor $20** ISBN 978-0-13-498793-4

(Module ID 21203-18) Covers the types of inspections typically performed on mobile cranes. Describes service requirements for crane maintenance.

### Load Dynamics (17.5 Hours)
- **Instructor $20** ISBN 978-0-13-498791-0

(Module ID 21206-18) Covers leverage, forward and backward stability, operational quadrants, submerged lifts, non-centered lifts, and other forces that affect stability.

### Transporting Requirements (17.5 Hours)
- **Instructor $20** ISBN 978-0-13-498788-0

(Module ID 21308-18) Discusses the proper handling, loading and unloading, and securing procedures for mobile cranes and their components. Presents information on driver requirements and procedures for securing the mobile crane for transporting.

### On-Site Equipment Movement (25 Hours)
- **Instructor $20** ISBN 978-0-13-498786-6

(Module ID 21207-18) Covers site hazards and restrictions that could hinder on-site crane movement; safety considerations involved in crane movement over unlevel ground; pick-and-carry operations; and power line contact. Also addresses flotation capacity.

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### MODULeS

All of the modules listed below are included in the Trainee Guide. The following ISBN and pricing information is for ordering individual modules only.

#### Orientation to the Trade (5 Hours)

(Module ID 21101-18) Provides an overview of the entire course and highlights the duties and responsibilities of a mobile crane operator. Discusses ASME B30.5 and 29 CFR 1926, Subpart CC, as well as crane operator certification.

#### Basic Principles of Cranes (15 Hours)
- **Trainee $20** ISBN 978-0-13-498816-0

(Module ID 21102-18) Introduces mobile crane equipment with an in-depth discussion of terminology and nomenclature. Explains the basic scientific principles associated with mobile crane operation.

#### Rigging Practices (15 Hours)
- **Instructor $20** ISBN 978-0-13-498802-3

(Module ID 21021-18; from Basic Rigger) Includes an in-depth study of rigging practices relevant to the operation of cranes. Describes safety considerations related to power lines, weather conditions, and crane-specific functions.

#### Crane Communications (10 Hours)
- **Instructor $20** ISBN 978-0-13-498814-6

(Module ID 53101-18; from Signal Person) Covers communication between the crane operator and personnel on the crane site.

#### Crane Safety and Emergency Procedures (25 Hours)
- **Trainee $20** ISBN 978-0-13-498819-1
- **Instructor $20** ISBN 978-0-13-498818-4

(Module ID 21106-18) Covers safety standards and best safety practices relevant to the operation of cranes. Describes safety considerations related to power lines, weather conditions, and specific crane functions.

#### Computer Aids/Operator Aids (20 Hours)

(Module ID 21202-18) Discusses the power systems that enable cranes to perform. Discusses diesel and gasoline/propane engines and electrical/motor-generator, as well as mechanical, electrical, pneumatic, and hydraulic power systems.

#### Machine Power Flow (15 Hours)
- **Instructor $20** ISBN 978-0-13-498799-6

(Module ID 21202-18) Discusses the power systems that enable cranes to perform. Discusses diesel and gasoline/propane engines and electrical/motor-generator, as well as mechanical, electrical, pneumatic, and hydraulic power systems.

#### Wire Rope (25 Hours)
- **Trainee $20** ISBN 978-0-13-498794-1
- **Instructor $20** ISBN 978-0-13-498795-8

(Module ID 21204-18) Covers the components of wire rope and inspection requirements and procedures for wire rope, load blocks, and sheaves. Explains proper installation of wire rope, maintenance guidelines, and end terminations and preparations.

#### Load Charts (25 Hours)
- **Instructor $20** ISBN 978-0-13-498793-4

(Module ID 21203-18) Covers site hazards and restrictions that could hinder on-site crane movement; safety considerations involved in crane movement over unlevel ground; pick-and-carry operations; and power line contact. Also addresses flotation capacity.

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Mobile Crane Operations Level 3 (continued)

**Telescopic Boom Attachment Setup and Assembly** (20 Hours)
(Module ID 21302-18) Covers the setup and stowing of swing-away extensions and various jibs, as well as the assembly of intermediate boom sections, on telescopic cranes. Includes the description and operating characteristics of manual and power luffing jibs.

**Lattice Boom Assembly and Disassembly** (20 Hours)

**Hoisting Personnel** (20 Hours)
(Module ID 21305-18) Examines ASME B30.23 and 29 CFR 1926.550(g) requirements while presenting advanced operation techniques for hoisting personnel.

**Advanced Operational Techniques** (20 Hours)
(Module ID 21303-18) Covers multi-crane lifts, critical lifts, blind lifts, and demolition. Includes sections on how to use magnet and vacuum lifting devices and how to operate a mobile crane in cold weather.