

Tower Crane Operator

L1 TOWER CRANE OPERATOR

LEVEL 1



Curriculum Notes

- 180 Hours (includes Core)
- Published: 2010
- Downloadable instructor resources that include module tests, PowerPoints®, and performance profile sheets are available at www.nccer.org/irc.

PAPERBACK

Trainee Guide: \$69.99

ISBN

978-0-13-213720-1

MODULES

The modules listed below are included in the Trainee Guide. The following ISBNs are for ordering individual modules only.

Orientation to the Trade (5 Hours)

ISBN 978-0-13-213820-8

(Module ID 48101-10) Provides an overview of the tower crane industry and highlights the duties and responsibilities of a tower crane operator. Discusses ASME and OSHA standards, as well as career opportunities and operator requirements.

Basic Principles of Tower Cranes (20 Hours)

ISBN 978-0-13-213821-5

(Module ID 48102-10) Identifies the three main types of tower cranes and their components, including operator aids and base support systems. Explains the basic scientific principles associated with tower crane operation. Discusses the factors that affect lifting capacities.

Tower Crane Safety (15 Hours)

ISBN 978-0-13-213822-2

(Module ID 48103-10) Introduces various safety aspects of tower crane operation, including equipment inspection, rigging, swing paths, and site hazard identification.

Rigging Practices (15 Hours)

ISBN 978-0-13-213823-9

(Module ID 48104-10) Describes the use and inspection of basic equipment and hardware used in rigging, including slings, wire rope, chains, lifting beams, and attaching hardware such as shackles, eyebolts, and hooks. Explains sling capacities and sling angles.

Load Charts (15 Hours)

ISBN 978-0-13-213824-6

(Module ID 48105-10) Explains how to use load charts to calculate safe lifting capacities for self-erecting, luffing boom, and hammerhead tower cranes. Also covers parts of line and counterweight configurations.

Communications (10 Hours)

ISBN 978-0-13-213825-3

(Module ID 48106-10) Covers the fundamentals of the communication process, including verbal and nonverbal methods of communication. Also presents the ASME B30.3 hand signals, including the appropriate operator action when the signal is given.

Operating a Tower Crane (25 Hours)

ISBN 978-0-13-213826-0

(Module ID 48107-10) Describes the basic functions of a tower crane, as well as standard procedures for starting up and shutting down self-erecting, luffing boom, and hammerhead tower cranes. Provides an opportunity for trainees to become familiar with the actual operation of a tower crane and the functions of its controls.