

## L1 SITE LAYOUT

### LEVEL 1



### Curriculum Notes

- 165 Hours
- Includes 75 hours of Core, which is a prerequisite for Level 1 completion and must be purchased separately. For more information, please refer to page 9 of the full Curriculum Catalog or visit [www.nccer.org/catalog](http://www.nccer.org/catalog).
- Published: 2004
- Downloadable instructor resources that include module tests, PowerPoints®, and performance profile sheets are available at [www.nccer.org/irc](http://www.nccer.org/irc).

### PAPERBACK

Trainee Guide: \$69.99

### ISBN

978-0-13-109173-3

## MODULES

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

### Introduction to Site Layout (10 Hours)

ISBN 978-0-13-109882-4

(Module ID 78101-04) Provides an overview of the site layout trade and related tasks. Covers the use of the builder's level and leveling rods, as well as the equipment and procedures for making distance measurements by taping (chaining). Also covers the elements of professional conduct, safety, and communications. Briefly describes the aspects of an apprenticeship program and the career path and professional opportunities related to the site layout trade.

### Surveying Math (30 Hours)

ISBN 978-0-13-109883-1

(Module ID 78102-04) Expands on the Core module, *Introduction to Construction Math*, with emphasis on the metric system, including how to convert between English and metric system units. Covers basic concepts for working with formulas and equations, as well as basic geometry and right-angle trigonometry.

### Survey Equipment Use and Care One (30 Hours)

ISBN 978-0-13-109884-8

(Module ID 78103-04) Covers the use and care of tools and instruments commonly used to perform site survey work. Introduces the instruments and procedures used for making distance measurements electronically and for performing differential leveling and basic horizontal and vertical angular measurements. Includes guidelines for recording surveying measurement data in field notes.

### Blueprint Reading for Surveyors (20 Hours)

ISBN 978-0-13-109886-2

(Module ID 78104-04) Expands on the Core module, *Introduction to Construction Drawings*, and provides techniques for reading and using drawings and specifications. Emphasis is placed on drawings and types of information that are relevant to the site layout trade.

## L2 SITE LAYOUT

### LEVEL 2

### Curriculum Notes

- 145 Hours
- Published: 2004
- Downloadable instructor resources that include module tests, PowerPoints®, and performance profile sheets are available at [www.nccer.org/irc](http://www.nccer.org/irc).

### PAPERBACK

Trainee Guide: \$99.99

### ISBN

978-0-13-109176-4

### Survey Equipment Use and Care Two, EDMs and Total Stations (10 Hours)

ISBN 978-0-13-160022-5

(Module ID 78202-04) Covers the setup, use, calibration, and care of electronic distance measuring instruments and total stations.

### Control Setup (30 Hours)

ISBN 978-0-13-160023-2

(Module ID 78203-04) Contains information and instructions for setting up, running, recording, and closing a horizontal traverse and a level loop. Also covers primary and secondary control plans, as well as vertical control for multilevel structures.

### Boundary and Topography Surveys (10 Hours)

ISBN 978-0-13-160024-9

(Module ID 78204-04) Contains information and instructions for gathering, recording, and plotting profile and cross-section leveling data. Includes plot and site plans to identify rights-of-way, utilities, setbacks, boundaries, and tie-in locations.

### Data Collection and Basic Computer Skills

(10 Hours)

ISBN 978-0-13-160025-6

(Module ID 78205-04) Covers the use of integrated total station systems and GPS surveying systems. Explains the use of integrated field and office software to collect and manage data.

### Concrete Properties and Quality Control

(15 Hours)

ISBN 978-0-13-160026-3

(Module ID 78206-04) Covers the chemical and physical properties of concrete and the components, such as cement, aggregates, and admixtures, that make up the concrete mixture. Explains the various methods and equipment used to sample, test, and inspect concrete.

### Means and Methods (40 Hours)

ISBN 978-0-13-160027-0

(Module ID 78207-04) Provides extensive coverage of soils and their classifications and explains how various soils behave in excavations. Covers the safety procedures and equipment used when working in or near trenches. Provides layout procedures for footings, piers, building corners, columns, walls, embedments, and stairs.

## MODULES

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

### Advanced Surveying Math (30 Hours)

ISBN 978-0-13-160021-8

(Module ID 78201-04) Covers the advanced math needed for site layout, including area and volume of solids, use of the Pythagorean Theorem to solve for distances and angles, and use of polar and rectangular coordinates. Covers common coordinate and grid systems.