



Carpentry

L1 CARPENTRY



LEVEL 1

Curriculum Notes

- 225 Hours (Includes 72.5 hours of *Core Curriculum*, which is a prerequisite for Level 1 completion and must be purchased separately. See p. 11 for ordering information.)
- Revised: 2013, Fifth Edition
- New printed Instructor's Package includes lesson plans and instructor's copy of Trainee Guide with access code to download TestGen software, module exams, PowerPoints®, and performance profile sheets from www.nccerirc.com.
- A Spanish translation of the fourth edition is available. Please see NCCER's online catalog for more information.

HARDCOVER ISBN
Trainee Guide: \$69 **978-0-13-340380-0**

PAPERBACK ISBN
Trainee Guide: \$67 **978-0-13-340237-7**
Instructor's Package: \$67 **978-0-13-416620-9**

NCCERconnect Access Card: \$67 **978-0-13-420508-3**

NCCERconnect +
Hardcover Trainee Guide: \$94 **978-0-13-427462-1**

NCCERconnect +
Paperback Trainee Guide: \$92 **978-0-13-429856-6**

MODULES

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

Orientation to the Trade (5 Hours)

Trainee \$20 ISBN 978-0-13-340299-5
Instructor \$20 ISBN 978-0-13-340309-1
(Module ID 27101-13) Reviews the history of the trade, describes the apprentice program, identifies career opportunities for carpenters and construction workers, and lists the skills, responsibilities, and characteristics a worker should possess. Emphasizes the importance of safety in the construction industry.

Building Materials, Fasteners, and Adhesives (7.5 Hours)

Trainee \$20 ISBN 978-0-13-340300-8
Instructor \$20 ISBN 978-0-13-340310-7
(Module ID 27102-13) Introduces the building materials used in construction work, including lumber, sheet materials, engineered wood products, structural concrete, and structural steel. Also describes the fasteners and adhesives used in construction work. Discusses the methods of squaring a building.

Hand and Power Tools (7.5 Hours)

Trainee \$20 ISBN 978-0-13-340301-5
Instructor \$20 ISBN 978-0-13-340311-4
(Module ID 27103-13) Provides descriptions of hand tools and power tools used by carpenters. Emphasizes safe and proper operation, as well as care and maintenance.

Introduction to Construction Drawings, Specifications, and Layout (20 Hours)

Trainee \$20 ISBN 978-0-13-340302-2
Instructor \$20 ISBN 978-0-13-340312-1
(Module ID 27104-13) Covers the techniques for reading and using construction drawings and specifications, with an emphasis on drawings and information relevant to the carpentry trade. Introduces quantity takeoffs.

Floor Systems (27.5 Hours)

Trainee \$20 ISBN 978-0-13-340303-9
Instructor \$20 ISBN 978-0-13-340313-8
(Module ID 27105-13) Covers framing basics and the procedures for laying out and constructing a wood floor using common lumber, as well as engineered building materials.

Wall Systems (20 Hours)

Trainee \$20 ISBN 978-0-13-340304-6
Instructor \$20 ISBN 978-0-13-340314-5
(Module ID 27111-13) Describes procedures for laying out and framing walls, including roughing-in door and window openings, constructing corners, partition Ts, and bracing walls. Includes the procedure to estimate the materials required to frame walls.

Ceiling Joist and Roof Framing (40 Hours)

Trainee \$20 ISBN 978-0-13-340305-3
Instructor \$20 ISBN 978-0-13-340315-2
(Module ID 27112-13) Describes types of gable roofs, hip roofs, and valley intersections. Covers stick-built and truss-built roofs. Includes the basics of roof sheathing installation.

Introduction to Building Envelope Systems (12.5 Hours)

Trainee \$20 ISBN 978-0-13-340307-7
Instructor \$20 ISBN 978-0-13-340318-3
(Module ID 27109-13) Introduces the concept of the building envelope and explains its components. Describes types of windows, skylights, and exterior doors, and provides instructions for installation.

Basic Stair Layout (12.5 Hours)

Trainee \$20 ISBN 978-0-13-340306-0
Instructor \$20 ISBN 978-0-13-340317-6
(Module ID 27110-13) Introduces types of stairs and common building code requirements related to stairs. Focuses on techniques for measuring and calculating rise, run, and stairwell openings, laying out stringers, and fabricating basic stairways.

L2 CARPENTRY FRAMING & FINISHING

LEVEL 2

Curriculum Notes

- 210 Hours
- Optional Residential Path: 170 Hours
- Optional Commercial Path: 150 Hours
- Revised: 2013, Fifth Edition
- New printed Instructor's Package includes lesson plans and instructor's copy of Trainee Guide with access code to download TestGen software, module exams, PowerPoints®, and performance profile sheets from www.nccerirc.com.

HARDCOVER ISBN
Trainee Guide: \$99 **978-0-13-340465-4**

PAPERBACK ISBN
Trainee Guide: \$97 **978-0-13-340430-2**
Instructor's Package: \$97 **978-0-13-416621-6**

NCCERconnect Access Card: \$97 **978-0-13-442808-6**

NCCERconnect +
Hardcover Trainee Guide: \$124 **978-0-13-453971-3**

NCCERconnect +
Paperback Trainee Guide: \$122 **978-0-13-453972-0**

MODULES

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

Commercial Drawings *Elective for Residential Path* (25 Hours)

Trainee \$20 ISBN 978-0-13-377929-5
Instructor \$20 ISBN 978-0-13-377918-9
(Module ID 27201-13) Describes how to read and interpret a set of commercial drawings and specifications.

Cold-Formed Steel Framing (15 Hours)

Trainee \$20 ISBN 978-0-13-377910-3
Instructor \$20 ISBN 978-0-13-377923-3
(Module ID 27205-13) Describes the types and grades of steel framing materials, and includes instructions for selecting and installing metal framing for interior and exterior walls, loadbearing and nonbearing walls, partitions, and other applications.

Exterior Finishing *Elective for Commercial Path* (35 Hours)

Trainee \$20 ISBN 978-0-13-377909-7
Instructor \$20 ISBN 978-0-13-377922-6
(Module ID 27204-13) Covers the various types of exterior finish materials and their installation procedures, including wood, metal, vinyl, and fiber-cement siding.

Thermal and Moisture Protection (7.5 Hours)

Trainee \$20 ISBN 978-0-13-377903-5
Instructor \$20 ISBN 978-0-13-377921-9
(Module ID 27203-13) Covers the selection and installation of various types of insulating materials in walls, floors, and attics. Also covers the uses and installation practices for vapor barriers and waterproofing materials.

Carpentry Level 2

Roofing Applications *Elective for Commercial Path* (25 Hours)

Trainee \$20 ISBN 978-0-13-377902-8
Instructor \$20 ISBN 978-0-13-377919-6
(Module ID 27202-13) Describes how to properly prepare the roof deck and install roofing for residential and commercial buildings.

Doors and Door Hardware (20 Hours)

Trainee \$20 ISBN 978-0-13-377914-1
Instructor \$20 ISBN 978-0-13-377925-7
(Module ID 27208-13) Describes the installation of metal doors and related hardware in steel-framed, wood-framed, and masonry walls, along with their related hardware, such as locksets and door closers. Also discusses the installation of wood doors, folding doors, and pocket doors.

Drywall Installation (15 Hours)

Trainee \$20 ISBN 978-0-13-377911-0
Instructor \$20 ISBN 978-0-13-377926-4
(Module ID 27206-13) Describes the various types of gypsum drywall, their uses, and the fastening devices and methods used to install them. Contains detailed instructions for installing drywall on walls and ceilings using nails, drywall screws, and adhesives. Also discusses fire- and sound-rated walls.

Drywall Finishing (17.5 Hours)

Trainee \$20 ISBN 978-0-13-377913-4
Instructor \$20 ISBN 978-0-13-377924-0
(Module ID 27207-13) Describes the materials, tools, and methods used to finish and patch gypsum drywall. Also discussed automatic and manual taping and finishing tools.

Suspended Ceilings *Elective for Residential Path* (15 Hours)

Trainee \$20 ISBN 978-0-13-377915-8
Instructor \$20 ISBN 978-0-13-377927-1
(Module ID 27209-13) Describes the materials, layout, and installation procedures for many types of suspended ceilings used in commercial construction, as well as ceiling tiles, drywall suspension systems, and pan-type ceilings.

Window, Door, Floor, and Ceiling Trim (25 Hours)

Trainee \$20 ISBN 978-0-13-377916-5
Instructor \$20 ISBN 978-0-13-377928-8
(Module ID 27210-13) Describes the different types of trim used in finish work and focuses on the proper methods for selecting, cutting, and fastening trim to achieve a professional finished appearance.

Cabinet Installation (10 Hours)

Trainee \$20 ISBN 978-0-13-377917-2
Instructor \$20 ISBN 978-0-13-377929-5
(Module ID 27211-13) Provides detailed instructions for the selection and installation of base and wall cabinets and countertops.

L3 CARPENTRY FORMS

LEVEL 3

Curriculum Notes

- 160 Hours
- Revised: 2014, Fifth Edition
- New printed Instructor's Package includes lesson plans and instructor's copy of Trainee Guide with access code to download TestGen software, module exams, PowerPoints®, and performance profile sheets from www.nccerirc.com.
- A Spanish translation of the fourth edition is available. Please see NCCER's online catalog for more information.

PAPERBACK

ISBN

Trainee Guide: \$97	978-0-13-382305-9
Instructor's Package: \$97	978-0-13-416631-5
NCCERconnect Access Card: \$97	978-0-13-442809-3
NCCERconnect + Trainee Guide: \$122	978-0-13-453970-6

MODULES

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

Properties of Concrete (10 Hours)

Trainee \$20 ISBN 978-0-13-378674-3
Instructor \$20 ISBN 978-0-13-378685-9
(Module ID 27303-14) Describes the properties, characteristics, and uses of cement, aggregates, and other materials used in different types of concrete. Covers procedures for estimating concrete volume and testing freshly mixed concrete, as well as methods and materials for curing concrete.

Rigging Equipment (10 Hours)

(Module ID 38101-11; from *Basic Rigging*)

Trainee \$20 ISBN 978-0-13-378675-0
Instructor \$20 ISBN 978-0-13-378686-6

Rigging Practices (15 Hours)

(Module ID 38102-11; from *Basic Rigging*)

Trainee \$20 ISBN 978-0-13-378676-7
Instructor \$20 ISBN 978-0-13-378688-0

Trenching and Excavating (15 Hours)

Trainee \$20 ISBN 978-0-13-378678-1
Instructor \$20 ISBN 978-0-13-378689-7
(Module ID 27306-14) Provides an introduction to working in and around excavations, particularly in preparing building foundations. Describes types and bearing capacities of soils; procedures used in shoring, shielding, and sloping trenches and excavations; trenching safety requirements, including recognition of unsafe conditions; and mitigation of groundwater and rock when excavating foundations.

Reinforcing Concrete (15 Hours)

Trainee \$20 ISBN 978-0-13-378679-8
Instructor \$20 ISBN 978-0-13-378690-3
(Module ID 27304-14) Explains the selection and uses of different types of reinforcing materials. Describes requirements for bending, cutting, splicing, and tying reinforcing steel and the placement of steel in footings and foundations, walls, columns, and beams and girders.

Foundations and Slabs-On-Grade (20 Hours)

Trainee \$20 ISBN 978-0-13-378680-4
Instructor \$20 ISBN 978-0-13-378691-0
(Module ID 27307-14) Covers basic site layout safety, tools, and methods; layout and construction of deep and shallow foundations; types of foundation forms; layout and formation of slabs-on-grade; and forms used for curbing and paving.

Vertical Formwork (22.5 Hours)

Trainee \$20 ISBN 978-0-13-378681-1
Instructor \$20 ISBN 978-0-13-378692-7
(Module ID 27308-14) Covers the applications and construction methods for types of forming and form hardware systems for walls, columns, and stairs, as well as slip and climbing forms. Provides an overview of the assembly, erection, and stripping of gang forms.

Horizontal Formwork (15 Hours)

Trainee \$20 ISBN 978-0-13-378682-8
Instructor \$20 ISBN 978-0-13-378693-4
(Module ID 27309-14) Describes elevated decks and formwork systems and methods used in their construction. Covers joist, pan, beam and slab, flat slab, composite slab, and specialty form systems and provides instructions for the use of flying decks, as well as shoring and reshoring systems.

Handling and Placing Concrete (20 Hours)

Trainee \$20 ISBN 978-0-13-378683-5
Instructor \$20 ISBN 978-0-13-378694-1
(Module ID 27305-14) Covers tools, equipment, and procedures for safely handling, placing, and finishing concrete. Describes joints made in concrete structures and the use of joint sealants.

Tilt-Up Wall Systems (17.5 Hours)

Trainee \$20 ISBN 978-0-13-378684-2
Instructor \$20 ISBN 978-0-13-378695-8
(Module ID 27310-14) Describes how tilt-up concrete construction is used and how tilt-up panels are formed, erected, and braced. Covers the installation of rebar and types of embedments used to lift and brace the panels. Also covers methods used to create architectural and decorative treatments.

L4 CARPENTRY ADVANCED

LEVEL 4

Curriculum Notes

- 182.5 Hours (162.5 Required, 20 Elective)
- Revised 2014, Fifth Edition
- New printed Instructor's Package includes lesson plans and instructor's copy of Trainee Guide with access code to download TestGen software, module exams, PowerPoints®, and performance profile sheets from www.nccerirc.com.

PAPERBACK

ISBN

Trainee Guide: \$97	978-0-13-382314-1
Instructor's Package: \$97	978-0-13-428576-4
NCCERconnect Access Card: \$97	978-0-13-442810-9
NCCERconnect + Trainee Guide: \$122	978-0-13-453969-0



Carpentry Level 3 (continued)

MODULES

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

Site Layout One: Differential Leveling

(20 Hours)

Trainee \$20 ISBN 978-0-13-378698-9
Instructor \$20 ISBN 978-0-13-378710-8

(Module ID 27401-14) Covers the principles, equipment, and methods used to perform differential leveling. Also covers the layout responsibilities of surveyors, field engineers, and carpenters; interpretation and use of site/plot plan drawings; use of laser instruments; and methods used for on-site communication.

Site Layout Two: Angular and Distance Measurement

(37.5 Hours)

Trainee \$20 ISBN 978-0-13-378700-9
Instructor \$20 ISBN 978-0-13-378711-5

(Module ID 27402-14) Covers the principles, equipment, and methods used to perform site layout tasks that require angular and distance measurements. Tasks include laying out building lines and determining elevations by trigonometric leveling. Covers the use of transits, theodolites, electronic distance measurement, and total stations. Reviews trade mathematics needed to perform calculations related to angular measurements.

Advanced Roof Systems

(20 Hours)

Trainee \$20 ISBN 978-0-13-378702-3
Instructor \$20 ISBN 978-0-13-378714-6

(Module ID 27403-14) Covers commercial roofing materials and structures and describes the procedures for installing commercial roofing such as lap seam, standing seam, and built-up roofs.

Advanced Wall Systems

(25 Hours)

Trainee \$20 ISBN 978-0-13-378704-7
Instructor \$20 ISBN 978-0-13-378715-3

(Module ID 27404-14) Covers installation of a variety of finishing materials, including concrete masonry units and brick. Also covers installation of curtain walls and fire-rated commercial construction.

Advanced Stair Systems

(25 Hours)

Trainee \$20 ISBN 978-0-13-378705-4
Instructor \$20 ISBN 978-0-13-378717-7

(Module ID 27405-14) Provides extensive coverage of the materials and techniques used in finishing wooden staircases. Also covers a variety of stair systems used in commercial construction.

Introduction to Construction Equipment

(7.5 Hours)

Trainee \$20 ISBN 978-0-13-378706-1
Instructor \$20 ISBN 978-0-13-378718-4

(Module ID 27406-14) Introduces construction equipment, including the aerial lift, skid steer loader, electric power generator, compressor, compactor, and forklift. An overview of general safety, operation, and maintenance procedures is provided.

Introduction to Oxyfuel Cutting and Arc Welding

(20 Elective Hours)

Trainee \$20 ISBN 978-0-13-378707-8
Instructor \$20 ISBN 978-0-13-378719-1

(Module ID 27407-14) Introduces the equipment, procedures, and safety practices used in cutting steel with oxyfuel equipment, as well as shielded metal arc welding, gas-tungsten arc welding, and gas metal arc welding. Labs include practice in cutting and welding techniques.

Site Preparation

(7.5 Hours)

Trainee \$20 ISBN 978-0-13-378697-2
Instructor \$20 ISBN 978-0-13-378709-2

(Module ID 27409-14) Covers the planning process that precedes the start of work on a construction site, including environmental considerations, personnel issues, access roads, traffic control, permits, site safety, utilities, and crane-related concerns.

Fundamentals of Crew Leadership

(20 Hours)

(Module 46101-11; see p. 69)

Trainee \$43 ISBN 978-0-13-378708-5
Instructor \$43 ISBN 978-0-13-378722-1

Cabinetmaking



35 Hours
Revised: 2016, Third Edition
Module ID 27501-15

PAPERBACK

Trainee Guide: \$22 ISBN 978-0-13-428854-3
Instructor's Guide: \$22 ISBN 978-0-13-428857-4

This module expands on the knowledge and skills gained through the Carpentry Curriculum and provides the basic information needed to construct and apply finishes to custom cabinetry. It identifies and discusses various types of wood products, wood-joining techniques, power tools, cabinet doors, shelves, and hardware. Specific guidance is also provided for the installation of laminated countertops.

From the Ground Up



Revised: 2006, Second Edition

PAPERBACK

Workbook: \$22 ISBN 978-0-13-229164-4
Instructor's Package: \$22 ISBN 978-0-13-229165-1

Instructor's Package includes workbook plus Instructor's Module with answers to review questions and exercises, cross-references to NCCER performance tests, and numerous teaching tips.