

# CARPENTRY

The Carpentry program is facilitated by a certified NCCER instructor. Instruction includes blueprint reading, applied math, rigging and safety, site preparation, concrete, masonry, commercial plumbing, commercial HVAC, sheet metal, commercial carpentry, commercial electrical, commercial plumbing and drywall, demolition and the basics of computer aided drafting and design. This program will offer students preparation to test for the industry-recognized credentials listed below.

## Program Information

- Required Math Score: Level 4
- Required Reading Score: Level 4
- Program Start (semesters): August; January
- Financial Aid available (for post-secondary students only): Yes
- Veteran Benefits Eligible (for post-secondary students only): Yes
- Industry-recognized credentials: NCCER Core; NCCER Carpentry 1; OSHA

## Certificate Requirements

Code	Title	Hours
CHC 105	Introductory Craft Skills	3
IND 109	OSHA - 30 Hour Const Ind Cert	2
BDT 142	Masonry	3
or BDT 217	Construction Electricity	
BDT 119	Carpentry Basics	4
BDT 122	Floors, Walls & Ceiling Frames	4
BDT 127	Windows, Doors & Stairs	3
BDT 137	Roof Framing	3
MAT 101	Technical Math I	3
Total Hours		25

### BDT 117 Carpentry I (4)

The intent of this course is to teach the students the history of the construction trade, building materials, different fasteners and adhesives, hand and power tools and reading plans and elevations. It also describes the apprentice program and career opportunities. The course will follow the NCCER modules for: Orientation to the Trade, Building Materials, Fasteners and Adhesives, Hand and Power Tools, and Reading Plans and Elevations.

### BDT 119 Carpentry Basics (4)

The intent of this course is to teach the students the history of the construction trade, building materials, different fasteners and adhesives, hand and power tools and reading plans and elevations. It also describes the apprentice program and career opportunities. The course will follow the NCCER modules for: Orientation to the Trade, Building Materials, Fasteners and Adhesives, Hand and Power Tools, and Reading Plans and Elevations.

### BDT 122 Floors, Walls & Ceiling Frames (4)

This course will cover lay out and erecting floor and wall and ceiling sections. The emphasis for this course is the understanding of precise layout of studs, sills, floor joist, and ceiling members. The student will learn how to layout partitions, door, and window openings. The student will perform the entire layout mentioned above, and know the correct symbols and names of all wall, floor, and ceiling components. The student will be introduced to the different methods used for framing buildings and floor framing with an emphasis on the platform, Balloon and post and beam framing method. The tools and materials used for this type of construction will be covered. The course will follow the NCCER modules for: Floor Systems, Wall and Ceiling Framing, and Introduction to Concrete, Reinforcing Materials and Forms.

### BDT 127 Windows, Doors & Stairs (3)

This course will introduce the student to methods and procedures used in the selection and installation of residential windows, doors, and stairs. Students will learn the proper components of windows and doors along with basic stair layout. This course will follow the NCCER modules for Windows and Exterior doors and Basic Stair Layout.

### BDT 132 Drywall (3)

The course introduces the student to the materials and techniques used in building and finishing residential and commercial buildings, including wood and steel framed structures. The course describes the various types of gypsum drywall, their uses, and the fastening devices and methods used to install them. The materials, tools and methods used to finish, and patch gypsum drywall are also covered.

### BDT 136 NCCER Plumbing Level 1 Part 1 (4)

This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Introduction to the Plumbing Profession, Plumbing Safety, Tools of the Plumbing Trade, Introduction to Plumbing Math, Introduction to Plumbing Drawings, Plastic Pipe and Fittings, Copper Pipe and Fittings, Cast-Iron Pipe and Fittings.

### BDT 137 Roof Framing (3)

Students will learn the different types of roofs used in residential and commercial construction. This course is the most demanding of the framing tasks. Unlike floor and wall construction that involve working with straight lines, roofs are sloped requiring the framer to understand and calculate precise angles. The student will learn the names of all the roof parts and how to calculate the angles to achieve a properly constructed roof. This course will follow the NCCER modules for roof framing.

### BDT 138 NCCER Plumbing Level 1 Part 2 (4)

This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Introduction to the Cast-Iron Pipe and Fittings, Carbon Steel Pipe and Fittings, Introduction to Plumbing Fixtures, Introduction to Drain, Waste, and Vent (DWV) Systems, and Introduction to Water Distribution Systems.

### BDT 142 Masonry (3)

This course introduces the student to the fundamentals of masonry work. The student will have the opportunity to gain practical knowledge of masonry as a trade, develop skills in the use of the tools, equipment, materials, and techniques used in masonry.

**BDT 156 NCCER Plumbing Level 2 Part 1 (4)**

This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Plumbing Math Two, Reading Commercial Drawings, Structural Penetrations, Insulation, and Fire Stopping, Installing and Testing DWV Piping.

**BDT 158 NCCER Plumbing Level 2 Part 2 (4)**

This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Installing Roof, Floor, and Area Drains, Installing and Testing Water Supply Piping, Types of Valves, Installing Fixtures and Valves, Installing Water Heaters, Basic Electricity, and Fuel Gas and Fuel Oil Systems.

**BDT 212 Carpentry II (4)**

Students will learn the techniques of framing and finishing. The students will have the opportunity to become familiar with roofing application, thermal and moisture protection, exterior finishing, commercial drawings, and cold-formed steel framing. This will follow the NCCER modules for Carpentry Level Two.

**BDT 217 Construction Electricity (3)**

This course introduces the students to the electrical field. It also provides the student with an opportunity to understand the connection between the two construction fields. The student will be introduced to series, parallel, series-parallel circuits, hardware and systems used by electricians. It also provides a navigational road map for use of the National Electrical Code.

**BDT 222 Plumbing (4)**

The course will familiarize the student with the terminology and basic plumbing principles used in the plumbing profession. A variety of topics will be present such as safety, tools, drawings, fittings, fixtures, and faucets. This course will follow the NCCER modules for Plumbing Level One.

**BDT 227 HVAC (4)**

The student will learn the basic functions of various Heat Pump design as well as charging and troubleshooting procedures.

**BDT 232 HVAC Lab (4)**

This HVAC Lab provides hands-on experience to identify major components and functions of air conditioning systems. Instruction is given on types of air conditioning systems and use of instrumentation. Lab topics include use of AC systems, heat-load calculation, properties of air, duct design, air filtration, and safety principles.

**BDT 236 NCCER Plumbing Level 3 Part 1 (4)**

This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Applied Math, Sizing Water Supply Piping, Potable Water Treatment, Backflow Preventers, Types of Venting.

**BDT 238 NCCER Plumbing Level 3 Part 2 (4)**

This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Sizing DWV and Storm Systems, Sewage Pumps and Sump Pumps, Corrosive-Resistant Waste Piping, and Compressed Air.

**BDT 256 NCCER Plumbing Level 4 Part 1 (4)**

This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Business Principles for Plumbers, Introductory Skills for the Crew Leader, Water Pressure Booster and Recirculation Systems, Indirect and Special Waste.

**BDT 258 NCCER Plumbing Level 4 Part 2 (4)**

This course features a highly illustrated design, technical hints and tips from industry experts, review questions and a whole lot more! Key content includes: Hydronic and Solar Heating Systems, Codes, Servicing Piping Systems - Fixtures and Appliances, Private Water Supply Well Systems, Private Waste Disposal Systems, Swimming Pools and Hot Tubs, and Plumbing for Mobile Homes and Travel Trailers.

**BDT 270 Construction OJT (6)**

This course features a hands-on method of teaching the skills, knowledge, and competencies needed for employees to perform in the field of construction work. Students learn in an environment where they will need to practice the knowledge and skills obtained during their training.

**BDT 280 Building Tech OJT (4)**

This course features a hands-on method of teaching the skills, knowledge, and competencies needed for employees to perform in the field of building technology work. Students learn in an environment where they will need to practice the knowledge and skills obtained during their training.

**BDT 290 Carpentry OJT (6)**

This course features a hands-on method of teaching the skills, knowledge, and competencies needed for employees to perform in the field of carpentry. Students learn in an environment where they will need to practice the knowledge and skills obtained during their training.