



## **CURRICULUM FOR CARPENTRY LEVEL - 1**

**For ABC, Inc. - Northern Ohio Chapter, Training Program**

### **OSHA 10hr Training**

**Core** – 72.5 Mandatory Hours; 15 Elective/Optional Hours: - Covers basic safety, construction math, hand and power tools, blueprint reading, basic rigging, and communication & employability skills.

**Orientation to the Trade** – 2.5hrs: Reviews the history of the trade.

**Building Materials, Fasteners and Adhesives** - 7.5hrs: Describes the sources and uses of various softwoods and hardwoods, explains the grading systems for lumber and plywood. Many kinds of fasteners and adhesives used with wood and masonry are also described.

**Hand and Power Tools** – 10hrs: Provides detailed descriptions and explanations of the use of the many hand-operated and power tools used by carpenters, including power-actuated fasteners. Emphasis is on safe and proper operation of tools as well as care and maintenance.

**Reading Plans and Elevations** – 20hrs: Trainees will learn techniques for reading and using blueprints and specifications with an emphasis [;aced pm those drawings and types of information that are relevant to carpentry trade.

**Floor Systems** – 25hrs: Covers framing basics as well as the procedures for laying out and constructing a wood floor using common lumber as well as engineered building materials.

**Wall and Ceiling Framing** – 20hrs: Describes the procedures for laying out the framing walls and ceilings, including roughing-in door and window openings, constructing corners and partitions T's, bracing walls and ceilings, and applying sheathing.



## CURRICULUM FOR CARPENTRY LEVEL - 1 CONTINUED

Northern Ohio  
Chapter

**Roof Framing** – 37.5hrs: Describes the various kinds of roofs and contains instructions for laying out rafters for gables roof, hip roofs, and valley intersections. Coverage includes both stick-built and truss-built roofs.

**Introduction to Concrete, Reinforcing Materials, and Forms** – 5hrs: Describes the ingredients of concrete, discusses the various types of concrete, and describes how to mix concrete.

**Window and Exterior Doors** - 12.5hrs: Describes the various types of windows, skylights, and exterior doors, and provides instructions for installing them. Also, includes instructions for installing weatherstripping and locksets.

**Basic Stair Layout** – 12.5hrs: Introduces the trainee to the various types of stairs and the common building code requirements related to stairs.

**Total Hours Level 1: 144**



## **CURRICULUM FOR CARPENTRY LEVEL - 2**

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**Commercial Drawings** – 25hrs: Describes the types and uses of drawings prepared for commercial structures

**Roofing Applications** – 25hrs: Covers the common materials used in residential and light commercial roofing, along with the safety practices and application methods for these materials.

**Thermal and Moisture Protection** – 7.5 Hrs.: Selection and installation of various types of insulating materials in walls, floors, and attics. Also covers the used and installation practices for vapor barriers and waterproofing materials.

**Exterior Finishing** – 35 Hrs.: Covers the various types of exterior siding used in residential construction and their installation procedures, including wood, metal, and vinyl siding. Also covers the installation of metal and vinyl gutters and downspouts.

**Cold-Formed Steel Framing** – 15hrs: Describes the types and grades of steel framing materials and includes instructions for selecting and installing metal framing for interior walls, exterior nonbearing walls, and partitions.

**Drywall Installation** – 15 hrs: Types of gypsum drywall, their uses, and the fastening devices and methods used to install them. Also covers fire & sound rated walls.

**Drywall Finishing** – 12.5 hrs: Covers materials, tools (both automatic & manual taping tools) and methods used to finish and patch gypsum drywall.



## CURRICULUM FOR CARPENTRY LEVEL – 2 CONTINUED

**Doors and Door Hardware** – 20hrs: Covers the installation of metal doors and related hardware in steel-framed, wood-framed, and masonry walls, along with their related hardware.

**Suspended Ceilings** – 15hrs: Includes 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 pay-type ceilings.

**Window, Door, Floor and Ceiling Trim** – 25hrs: Covers the different types of trim used in finish work and focuses on the proper methods for selecting, cutting and fastening trim to provide a professional finished appearance.

**Cabinet Installation** – 10hrs: Provides detailed instructions for the selection and installation of base and wall cabinets and countertops.

**Cabinet Fabrication** – 10 Elective Hours: Provides an introduction to materials, tools, and methods used in cabinetmaking. Practice projects help the trainee learn various joining techniques, while providing practice on stationary power tools.

**Total Hours Level 2: 144**



## **CURRICULUM FOR CARPENTRY LEVEL - 3**

### **For ABC, Inc. - Northern Ohio Chapter, Training Program**

**Rigging Equipment** – 10hrs: Describes the use and inspection of basic equipment and hardware used in rigging. Including slings, wire rope, chains, and attaching hardware such as shackles, eyebolts, and hooks as well as rigging knots.

**Rigging Practices** – 15hrs: Describes basic rigging and crane hazards and related safety procedures.

**Properties of Concrete** – 10hrs: Describes the properties, characteristics, and uses of cement aggregates, and other materials that, when mixed together form different types of concrete.

**Reinforcing Concrete** – 15hrs: Explains the selection and uses of different types of reinforcing materials, as well as describes requirements for cutting, bending, splicing, and tying reinforcing steel and the placement of steel in footings, columns, walls & slabs.

**Handling and Placing Concrete** – 22.5hrs: Covers tools, equipment, and procedures for handling, placing, and finishing concrete. Also covers joints made in concrete structures, the use of joint sealants, and form removal procedures.

**Trenching and Excavating** – 10hrs: Prepares the trainee for working in and around excavations, particularly in preparing building foundations.

**Foundations and Slab on Grade** – 20hrs: Covers basic site layout tools and methods; layout and construction of deep and shallow foundations; layout and forming of slabs on grade; and forms used for curbing and paving.

**Vertical Formwork** – 27.5hrs: Covers the applications and construction methods for various types of forming and form hardware systems for walls columns, and stairs.

**Horizontal Formwork** – 22.5hrs: Covers the types of elevated decks and the formwork systems and methods used in their construction.

**Tilt-Up Wall Panels** – 20hrs: Describes how tilt up concrete construction is used and how tilt up panels are formed, erected and braced.

**Total Hours Level 3: 144**



## **CURRICULUM FOR CARPENTRY LEVEL - 4**

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Northern Ohio  
Chapter

**Site Layout One – Distance Measurement and Leveling** – 22.5hrs: Covers the principles, equipment, and methods used to perform distance measurement and differential leveling. Also covers the layout responsibilities of surveyors, field engineers, and carpenters; understanding and using site/plot plan drawings; and methods for onsite communication.

**Site Layout Two: Angular Measurement** – 30hrs: Principles, equipment, and methods used to perform the site layout tasks that require making angular measurements, including laying out building foundation lines and determining elevations by trigonometric leveling. Cover use of laser instruments, transits, theodolites, electronic distance measurement, and total stations.

**Advanced Roof Systems** – 20hrs: Covers commercial roofing materials and structures and describes the procedures for installing commercial roofing, such as standing seam, lap seam, and built up roofs.

**Advanced Wall Systems** – 25hrs: Installation of a variety of finishing materials, such as paneling, wainscoting, and movable partitions, also includes installation of curtain walls and fire-rated commercial construction.

**Advanced Stair Systems** – 25hrs: Extensive coverage of materials and techniques used in finishing wooden staircases also covers a variety of stair systems used in commercial construction.

**Introduction to Light Equipment** – 10hrs: Overview of general safety, operation and maintenance procedures of light construction equipment commonly used at a construction site such as aerial lift, skid steer loader, trencher, electric power generator, compressor, compactor, and forklift.

**Welding** – 25 Elective hours: Introduces equipment, procedures, and safety practices used in cutting steel with oxyfuel equipment and in shielded metal arc welding.

**Commercial Finish Work** – 5hrs: Introduces the variety of specialized finish materials used on interior and exterior walls, ceilings, and floors of commercial buildings.

**Site Preparation** – 7.5hrs: 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.

**Introductory Skills for the Crew Leader** – 16hrs: Along with the principles of project planning, scheduling, estimating, and management, teaches the basic skills required for supervising personnel.

**Total Hours Level 4: 144**