

Carpentry

Build a future: a wide range of career paths start with carpentry

Western Monroe & Orleans Counties
WEMOCO
Career & Technical Education Center



Students learn the fundamentals of residential carpentry and participate in the construction of a new house on site. Experience is gained in wall, ceiling and roof framing, exterior finishing, trimming, windows and doors, insulation and floor systems.

Units of Study

- Carpenters on the Job
- Safety on the Jobsite
- Hand/Power Tools, Materials and Fasteners
- Print Interpretations
- Site and Building Layout
- Footings/Foundations
- Stationary Power Tools
- Floor, Wall and Roof Framing
- Shop Projects
- Windows and Doors
- Insulation Systems
- Cabinetry
- Drywall
- Interior Trim
- Exterior Finishes
- Stair Framing
- Finished Flooring
- Interior Finishing

Integrated Academics

- English
- Math

Licensing / Industry- Based Certifications

- OSHA 10 Construction Industry
- International Brotherhood of Carpenters' and Joiners' Career Connection (IBJCJC) Curriculum

Work-Based Learning

CTE programs bring students into the workplace for real life experiences. Businesses that support our Carpentry program:

- BBT Construction
- Campus Construction
- DGA Builders
- Greater Rochester Housing Partnership
- J. Vogler Enterprise
- LeChase Construction
- Monroe County Planning & Development
- NAWIC
- P&CG Power & Construction Group
- RES Exhibits
- Rochester Colonial
- Warren Construction

Articulation Agreements

- Alfred State
- SUNY Morrisville



Career Outlook

All CTE programs correlate to many careers paths. Use the links below to explore more. One example:

Job Projections for Construction
Carpenters: 9% projected growth in New York State jobs 2016-2026.

New York State salary range:
\$35,860 entry level- \$77,700 experienced

Education Requirements: Carpenters typically train for the profession through career and technical education programs or apprenticeships.

Explore more:

<https://www.careerzone.ny.gov/>
<https://www.onetonline.org/find/>

WEMOCO
Career & Technical Education Center

WEMOCO Career & Technical Education Center
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@WEMOCOCTE


Your Educational Partner of Choice
BOCES 2

Carpentry

Employability Profile

Career Readiness

Attendance _____

Punctuality _____

Appropriate Workplace appearance _____

Takes Initiative _____

High Quality of work _____

Knowledge of workplace ethics _____

Responsive to supervisor _____

Effective Communication skills _____

Solves problems _____

Makes decisions _____

Cooperates with others _____

Resolves conflict _____

Observes critically _____

Takes responsibility for learning _____

Reads with understanding _____

Solves problems using math _____

Complies with health and safety rules _____

Uses technology appropriately _____

Construction Math

Demonstrate the ability to read the standard ruler into whole inches, halves, fourths, eighths, and sixteenths _____

Apply practical construction math to finding area, square footage, perimeter footage _____

Hand and power Tools

Select correct hand tool for proper application _____

Select correct power tool for proper application _____

Demonstrate proper maintenance of hand and power tools _____

Use hand and power tools in a safe and appropriate manner _____

Thermal and Moisture Protection

Calculate the required amounts of insulation for a structure _____

Install selected insulation materials _____

Install vapor barrier _____

Drywall installation

Select fasteners for installation _____

Perform a single layer installation with various types of fasteners _____

Estimate material quantities for a drywall installation _____

Floor Systems

Lay out and construct a floor assembly _____

Lay out and install a sill/box frame _____

Install solid bridging _____

Lay out proper spacing and install floor joist _____

Install sub-floor _____

Introduction to Construction Drawings

List and label selected symbols and abbreviations used on drawings _____

Read and interpret site/plot plans _____

Read and interpret foundation, floor, and other plan view drawings _____

Read and interpret elevation view drawings _____

Read and interpret section and detail drawings _____

Read and interpret schedules _____

Read and interpret written specifications _____

Wall and Ceiling Framing

Lay out, assemble, erect, and brace exterior walls _____

Apply exterior sheathing to exterior walls _____

Estimate the material required to frame walls and ceilings _____

Roof Framing

Use a framing square, speed square, and calculator to lay out a roof rafter _____

Frame a gable roof with vent openings _____

Erect a gable roof using trusses _____

Estimate the materials used in framing and sheathing a roof _____

Basic Stair layout

Identify Types of stairs _____

Identify Stairway components and typical code requirements _____

Select proper materials used in the construction of a stair _____

Interpret construction drawings of stairs _____

Calculate the total rise and run of a stair _____

Layout and cut stringers, risers, and treads _____

Roofing Applications

Install a 3 tab shingle _____

Install an architectural shingle _____

Install ice and water shield _____

Install starter shingle _____

Materials and Fasteners

Select proper wood/size/grade _____

Select common fasteners and apply in appropriate application _____

Select common adhesives and apply in appropriate application _____

Introduction to Concrete

Recognize different properties of cement _____

Describe the composition of concrete _____

Preform volume estimates for concrete quantity requirements _____

Preform the safety procedures associated with the construction and uses of concrete form _____

Safety/OSHA 10

Show the use of personal protective equipment _____

Locate and show material safety data sheets _____

Implement the safe operation of hand and power tools _____

Examine fire hazards, fire extinguishers, and show proper use _____

Windows and Doors

Identify various types of fixed, sliding, and swinging windows _____

Identify the parts of a window installation _____

Install a new construction and replacement window _____

Install a pre-hung exterior door unit _____

Install a lock set _____

Exterior Finishing

Install a cornice _____

Estimate the amount of vinyl siding to cover a structure _____

Product comparison, advantages and disadvantages _____

Window, door, floor and ceiling trim

Window trim installation techniques _____

Door trim installation _____

Baseboard installation techniques _____

Ceiling trim installation _____

Estimating trim materials _____

Cabinet Installation

State the classes and sizes of typical base and wall kitchen cabinets _____

Layout factory made cabinets, countertops, and back splashes _____