

Learning Standards for the Building Construction Program of Study

Mt. Hood CTE Consortium

(The following list was created/edited by teachers at the secondary and post-secondary level in conjunction with local industry partners. These learning standards represent the common core that all teachers in the region will be responsible for teaching during the entire high school program of study.)

COMMON CONSTRUCTION/CARPENTRY

A SAFETY

- A 01 Maintain safe work attire and appearance
- A 02 Wear appropriate personal protective equipment (e.g., eye protection, ear protection, impact hat, etc.)
- A 03 Use equipment safety features correctly
- A 04 Use proper lifting techniques
- A 05 Adhere to lockout/tag-out rule and regulations
- A 06 Handle, use and store materials according to MSDS sheets

B MEASUREMENT

- B 01 Solve manufacturing and construction word problems
- B 02 Calculate linear feet, square feet, and board feet
- B 03 Measure accurately
- B 04 Lay out straight and angled cuts accurately
- B 05 Determine levelness and plumbness of surfaces, using a level
- B 06 Recognize materials
- B 07 Maintain/make minor adjustments to hand tools

C PRACTICE SAFE AND EFFECTIVE USE OF HAND AND PORTABLE POWER TOOLS

- C 01 Utilize planes and cabinet scrapers to smooth surfaces
- C 02 Drive and set nails and screws
- C 03 Drive and set nails and screws
- C 04 Fasten materials using a pneumatic stapler or nailer
- C 05 Drill holes with a portable power drill
- C 06 Create pocket screwed joints using a drill with jig
- C 07 Utilize a router to shape edges and cut a groove, dado and rabbet
- C 08 Utilize a sander for roughing and finishing

CARPENTRY

D OPERATE HAND AND POWER TOOLS/EQUIPMENT UTILIZED IN CARPENTRY

- D 01 Use and maintain hand tools

D 02 Use and maintain portable power tools, powder actuated tools, pneumatic tools, and extension cords

E USE PLANS, SPECIFICATIONS AND CODES

- E 01 Identify blueprint terms, components, and symbols
- E 02 Identify a set of drawings/symbols/scales and legends
- E 03 Read material schedules on blueprints
- E 04 Relate information on blueprints to actual locations
- E 05 Identify and use drawing dimensions
- E 06 Recognize building codes (i.e. national, state, and local)

F CUTTING AND SHAPING STOCK

- F 01 Crosscut stock to size
- F 02 Bore holes
- F 03 Square stock to 90 degrees

G ASSEMBLING AND FASTENING COMPONENTS

- G 01 Apply clamping devices

H FRAME AND FINISH A ROOF

- H 01 Construct conventional roof or set truss systems

I INSTALLING WOOD FLOORING AND FLOOR COVERING

- I 01 Install underlayment
- I 02 Install finished wood flooring
- I 03 Install tongue and groove flooring
- I 04 Identify different kinds of flooring material

CONSTRUCTION

J INSTALLING WOOD FLOORING AND FLOOR COVERING

- J 01 Demonstrate the use and care of precision measuring instruments
- J 02 Use a builder's level or transit and differential leveling procedures to determine site and building elevations
- J 03 Record site layout data and information in field notes using accepted practices

K PERFORM CONCRETE/MASONRY WORK

- K 01 Prepare and pour a footing
- K 02 Construct a foundation wall or pier
- K 03 Estimate the material needed for concrete/masonry work

L USE PLANS, SPECIFICATIONS AND CODES

- L 01 Install sill plate(s)
- L 02 Set posts
- L 03 Construct or place girders/beams
- L 04 Lay out and construct floor assembly

- L 05 Install joists for a cantilever floor
- L 06 Install a subfloor using butt-joint plywood/OSB panels

M DEMONSTRATING WALL AND CEILING FRAMING

- M 01 Lay out wall lines including plates, corner posts, door and window openings, partition Ts, bracing and plan for installation of fire stops
- M 02 Assemble wood stud walls
- M 03 Lay out, assemble, erect, and brace exterior walls for a frame building
- M 04 Cut and install ceiling joists on a wood frame building
- M 05 Estimate the materials required to frame walls and ceilings

N FRAME AND FINISH A ROOF

- N 01 Construct conventional roof and/or truss systems