

CNST-CONSTRUCTION

CNST 1110. General Carpentry or Building Trades I **8 Credits (2+12P)**

This course will have two components: a classroom segment, where carpentry concepts will be explored, and a hands-on segment where students will be able to participate in the actual construction of a structure. Habitat for Humanity has generously offered one of their projects as a "hands-on" site. May be repeated up to 8 credits.

Learning Outcomes

1. Identify and define various elements of a Structural Wood Wall.
2. Build Structural and non-load bearing Walls and Partitions using OSHA compliant safety practices.
3. Size floor joists and roof rafters according to local building codes.
4. Hang and "Trim Out" Doors and Windows for Residential Construction Projects.
5. Choose construction project foundations.

CNST 1114. Basic Carpentry Lab **3 Credits (1+4P)**

Provides students the opportunity to practice skills they have acquired in CNST 1114 and CNST 1115. It includes task-oriented projects in which students can apply many of the skills and knowledge that have been presented throughout the National Center for Construction and Education Research (NCCER) Carpentry Program.

Corequisite: CNST 1115, CNST 1116.

Learning Outcomes

1. Students will be able to operate hand and power tools safely.
2. Demonstrate the ability to read construction drawings.
3. Work effectively as a team.
4. Identify various types of building materials and their uses.
5. Calculate the quantities of lumber and wood products using industry standard methods.
6. Describe the fasteners, anchors and adhesives used in construction.
7. Describe the responsibilities of safety related to the construction industry.
8. Select proper tools for the job.
9. Identify the different grades and markings of wood building materials.
10. List and recognize different types of flooring materials. 1
11. Knowledge of the materials and methods used to construct floor systems using the platform method of floor framing. 1
12. Describe the procedure for laying out a wood frame wall. 1
13. Describe the correct procedure for laying out floor joist. 1
14. Estimate the materials required to frame a floor system.

CNST 1116. BASIC CARPENTRY LAB **2 Credits (2)**

CNST 1118. Math for Building Trades **3 Credits (3)**

Geometry, algebra, arithmetic, and basic trigonometry pertaining to mathematical applications in the building trades field. Same as OEET 118, DRFT 118, OEPB 118.

Prerequisite: CCDM 103 N.

CNST 1144. Woodworking Skills I **3 Credits (1+4P)**

Use and care of hand tools and elementary power tools, safety procedures, and supervised project construction. May be repeated up to 3 credits.

Learning Outcomes

1. Students will gain the skills necessary to use hand tools, and power tools, perform basic calculations accurately, and complete projects.
2. Students will purchase materials, draft, and construct one project without a door or drawer.
3. Students will develop creative thinking skills and problem-solving skills in working with the various hand tools.

CNST 1166. Woodworking Theory and Practice **3 Credits (2+2P)**

History of wood manufacturing, industrial techniques, wood characteristics, stains and finishes. Design and construction of minor wood projects. May be repeated up to 3 credits.

Learning Outcomes

1. Students will learn about the history of woodworking, learn about the different types of wood and best use for projects; learn about wood stain, and construct one project without a drawer working with various hand tools.

CNST 1311. Small Equipment Maintenance and Repair **4 Credits (2+4P)**

Covers small engine theory, troubleshooting and repair, auto maintenance, hydraulic theory and repair lubricants, batteries and scheduled tool maintenance. May be repeated up to 4 credits.

CNST 2994. Special Problems in Building Technology **1-4 Credits**

Individual studies in areas directly related to building technologies. May be repeated up to 4 credits.

Learning Outcomes

1. Varies.