Carpentry Fundamentals
Course Syllabus

Course Number: ACA-0998
OHLAP Credit: No
OCAS Code: None
Course Length: 45 Hours
Career Cluster: Architecture & Construction
Career Pathway: Construction
Career Major(s): Construction Academy

Pre-requisite(s):

Course Description: This course is an introduction to general carpentry safety, hand and power tool safety and operations, basic wall, floor and roof layout, and construction and project estimating.

Textbooks:

Course Objectives:

A. Demonstrate job safety practices.
1. Define terms related to safety.
2. State consequences of a worker using alcohol or drugs on the job.
3. Discuss reasons for safety consciousness on the job.
5. Match colors of the safety code with appropriate equipment and areas.
6. Describe the various classes of fires.
7. Define various toxic substances.
8. State reasons for Material Safety Data Sheets (MSDS).
9. State reasons why knowledge of first aid is important.
10. Identify personal safety equipment.
11. Identify job-site and shop safety violations.
12. Match types of fire-extinguisher symbols to given classes of fires.
13. Demonstrate the way to properly lift a heavy object.

B. List and identify uses of nails, fasteners and adhesives.
1. List the basic nail and staple types and their uses.
2. List the basic types of screws and their uses.
3. Identify the different types of anchors and their uses.
4. Describe the common types of adhesives used in construction work.

C. Select, care for, and safely use carpentry hand tools.
1. Define terms associated with hand tools.
2. Discuss the care and safe use of hand tools.
3. Name tools a beginning carpenter needs.
4. Demonstrate the ability to use the following tools:
a. Hammers
b. Handsaws  
c. Squares  
d. Planes  
e. Measuring Instruments  
f. Layout Instruments  
g. Boring and Drilling Hand Tools  
h. Screwdrivers  
i. Pliers  
j. Wrenches  
k. Files  
l. Chisels  
m. Clamps  
n. Miscellaneous Hand Tools  
o. Drywall Tools  

D. Select, care for, and safely use carpentry power tools.  

1. Define terms associated with power tools.  
2. Discuss safety rules pertaining to power tools.  
3. Discuss general guidelines for proper care of power tools.  
4. Discuss and safely use the following power tools:  
   a. Table Saws  
   b. Power Miter Saws  
   c. Portable Power Saws  
   d. Portable Drill, Screwdriver, and Hammer Drill  
   e. Pneumatic Fasteners  
5. Complete a safety test for each tool.  
6. Demonstrate the ability to:  
   a. Perform straight and angle cut-off operations  
   b. Perform ripping operations  
   c. Make miter and compound miter cuts  
   d. Drill and bore holes  
   e. Operate a pneumatic fastener  
   f. Safely load and use a powder-actuated tool  

E. Discuss carpentry related job opportunities and be able to apply for a job.  

1. List levels of training for carpentry-related jobs.  
2. List job opportunities open to skilled carpenters.  
3. Discuss personal attributes or attitudes that an employer looks for in an employee.  
4. Discuss procedures for applying for a carpentry job.  
5. List documents that an applicant may need when applying for a job.  
6. Complete a job application.  
7. Complete a personal information sheet.  
8. Write a resume.  

F. Identify floor and sill framing members and estimate materials.  

1. Define terms associated with floor and sill framing.  
2. Identify floor and sill framing and support members.  

G. Identify wall and partition members and estimate materials.  

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1. Define terms associated with wall framing.
2. Identify framing members used in wall and partition framing.

1 Frame Carpenter Skill Standards - Aligns with the National Center for Construction Education and Research standards

1 ODCTE objective
2 NCCER objective

Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures: 1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/College Credit: The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

College Credit Eligibility: The student must maintain a grade point average of 2.0 or better.