

# **COCONINO COMMUNITY COLLEGE**

## **COURSE OUTLINE**

Prepared by: Joe Costion  
Status: (Permanent)  
Revised by:

Date: Feb 09  
Expires:  
Date:

### A. Identification:

1. Subject Area: Construction Technology
2. Course Number: CTM 115
3. Course Title: Intro to Woodworking
4. Credit Hrs: 3
5. Catalog Description

Fundamental Woodworking Safety and Applications including basic wood shop safety precautions, practices & procedures. Basic wood working, project design, drawings, materials calculation & estimates. Basic shop procedures, wood preparation, joinery & jointing techniques. Emphasis on safe and proper use of wood working hand tools, portable power and stationary power tools. May be taken for S/U credit with instructor approval. Three lab, one lecture.

### B. Course Goals:

1. Safe operation & practices in a wood shop environment
2. Successful completion of a wood working project as deemed worthy of student knowledge & skills.

### C. Course Outcomes:

Students will:

1. Demonstrate and describe various safety precautions used in a wood working shop
2. Demonstrate the safe and proper use of commonly used hand, portable electric, and stationary power tools used in woodworking
3. Identify various types of woods and sheet goods used in a wood working shop
4. Prepare a drawing for a wood working project
5. Prepare a cutting list for a wood working project
6. Calculate the cost of materials for a given project
7. Describe and demonstrate knowledge of a variety of wood working techniques, glues, fasteners

### D. Assessment of Course Outcomes.

Assessment will include:

1. Department & faculty level review of student results from a variety of testing instruments.
2. Department level review of class integration with construction programs - current and future for student preparedness.

E. Course Content:

Will include:

1. Shop Safety
  - a. Accident Prevention
  - b. Personal Protective Safety Equipment
  - c. Eye and Face Protection
  - d. Hand & Foot Gear
  - e. Dust Masks & Respirators
2. Hand Tools for Wood Workers
  - a. Squares, Layout tools, Chisels, Hand Saws
  - b. Hammers
3. Machine Tools for Wood Workers
  - a. Portable Saws, Drills, Planers
  - b. Stationary Saws, Jointers, Planers, Sanders, Doweling & Biscuit Joiners
4. Woodworking Tools:
  - a. Portable Electric
  - b. Worm Drive Saws
  - c. Jig Saw
  - d. Routers
  - e. Drills
  - f. Sanders – Orbital & Belt
5. Power Saws
  - a. Table Saw
  - b. Panel Saw
  - c. Band Saw
  - d. Scroll Saw
6. Stationary Power Tools
  - a. Jointer
  - b. Planers
  - c. Belt & Disc Sanders
  - d. Drill Press
  - e. Doweling Machine
  - f. Lathe
7. Wood Identification
  - a. Hardwoods for Wood Working
  - b. Softwoods for Wood Working
  - c. Sheet Goods for Wood Working
    - i. Plywood - & Hard wood Veneers
    - ii. MDF's, etc.
8. Project Specifications
  - a. Design Your Project
  - b. Plans / Drawings Needed
    - i. From Prepared Resources
    - ii. Personal Resources
  - c. Rough & finish Materials for Cutting List from Drawings
  - d. Selection of Materials for project

- e. Cost Estimates & Materials Quotes
- 9. Construction Techniques
  - a. Wood Preparation
    - i. Layout
    - ii. Cutting, Planning, Jointing, Gluing, Assembly
  - b. Joinery Techniques various – Doweling, Biscuiting, Mortise & Tenon, Laps & Miters
  - c. Gluing and Clamping – Panels, Web & Face Frames, Boxes, Tops, etc.
  - d. Fasteners
    - i. Nails & Screws
    - ii. Dowels
    - iii. Biscuits
- 10. Finishing Techniques
  - a. Surface Preparation
    - i. Sanding
    - ii. Planning
    - iii. Wood Fillers
    - iv. Various Finishes