

**PALOMAR COLLEGE**  
**COURSE OUTLINE OF RECORD FOR**  
**DEGREE CREDIT COURSE**

  X   Transfer Course   X   A.A. Degree applicable course  
(check all that apply)

**COURSE NUMBER AND TITLE:** CFT-110 Machine Tool Joinery I

**UNIT VALUE:** 2,3,4

**MINIMUM NUMBER OF SEMESTER HOURS:** 64,96,128 lecture/laboratory

**BASIC SKILLS REQUIREMENTS:** Appropriate language and computational skills

**ENTRANCE REQUIREMENTS**

**PREREQUISITE:** CFT-105

**COREQUISITE:** None

**RECOMMENDED PREPARATION:** None

**SCOPE OF COURSE:**

Through the construction of a specific furniture project, students will advance to a sophisticated level of joinery and design-utilizing mortise and tenon, dovetails, frame and panel, and other joinery appropriate to fine furniture. With the addition of advanced machinery training, students will be able to develop and build a custom design of their choice, creating heirloom furniture in either traditional or contemporary styling.

**SPECIFIC COURSE OBJECTIVES:**

The student will be able to:

1. Design and develop working drawings for building an individual piece of carcass furniture.
2. Compare and contrast traditional techniques used to build solid wood furniture.
3. Identify and construct traditional joinery used to build solid wood furniture.
4. Identify and apply safe working practices in the operation of tools and machines.
5. Compare and contrast appropriate joinery for frame and panel systems.
6. Identify the basic principles of frame and panel design.
7. Identify and use proper adhesives for specific woodworking applications.
8. Properly assemble and square a carcass.

## **CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**

- I. Furniture Design
  - A. Good proportion
  - B. Sizing relationships/standards
  - C. Historical reference
  - D. Tools of design
    1. Sketching
    2. Mockups.
    3. Working drawings
- II. Material Usage
  - A. Allowance for movement
  - B. Harvesting wood to enhance design and maximize stability
  - C. Understanding wood figure
- III. Traditional Carcase Construction
  - A. Drawer partitions / web frames
  - B. Frame and panel
  - C. Solid panel sides
  - D. Post and panel methods
  - E. Bracket feet and cabriole legs
  - F. Traditional moldings
  - G. Top attachment
- IV. Joinery
  - A. Mortise and tenon
  - B. Dovetails
    1. Sliding
    2. Through
  - C. Cope and stick / raise panels
- V. Machine processes
  - A. Table Saw
  - B. Shaper
  - C. Pin Router
  - D. Wide belt sander
  - E. Band saw
  - F. Router
- VI. Carcase Assembly
  - A. Dry Fitting
  - B. Squaring techniques/tools to align
  - C. Proper use of cauls
- VII. Woodworking adhesives

## **REQUIRED READING:**

Extensive instructor originated handouts

## **SUGGESTED READING:**

Feirer, John. Furniture and Cabinetmaking. Peoria: Charles A. Bennet Company, Inc., 1983.  
Frid, Tage. Joinery Tools and Techniques. Newtown: The Taunton Press, 1985.  
Joyce, Ernest. Encyclopedia of Furnituremaking. New York- Sterling Publishing Company, Inc., 1979  
Fine Woodworking. The Taunton Press Inc. Newton, CT.  
The Woodworker's Journal Madrigal Publishing Company. New Milford, CT.  
Woodsmith. Woodsmith Publishing Company. Des Moines, IA.

### **REQUIRED WRITING:**

A written notebook is required of all students which is to include instructor provided handouts and lecture notes. A detailed project folder is also required as well as a written examination

### **OUTSIDE ASSIGNMENTS:**

**Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.**

Each student will complete a class notebook and project folder. Each student is responsible for required reading.

### **INSTRUCTIONAL METHODOLOGY:**

#### **Check all that apply:**

- lecture
- laboratory
- lecture-laboratory combination
- directed study

### **DISTANCE LEARNING:**

**This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.**

Yes  No

#### **If yes, check all that apply:**

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

**GRADING POLICY AND STANDARDS** (include methods of determining whether the stated objectives have been met by students):

Final grades will be based on the final factors:

- |    |   |     |
|----|---|-----|
| 1. | Participation:                                | 20% |
| 2. | Tests:  | 25% |
| 3. | Learning Projects                             | 30% |
| 4. | Notebook, design paper or product development | 25% |

**IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?**

Yes  No  Number of times course may be taken for credit: 3

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable: 58161 © (2) (A)

**CONTACT PERSON:**  
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**SIGNATURES ON FILE:**