



El Camino College
COURSE OUTLINE OF RECORD – Official

Course Acronym:	CTEC
Course Number:	200
Descriptive Title:	General Cabinet Making
Division:	Industry and Technology
Department:	Construction Technology
Course Disciplines:	Construction Technology
Catalog Description:	<p>This course is one in a series of courses designed for students to develop a solid background in the fundamentals of woodworking technology. Topics include operating stationary woodworking equipment, hand-held power tools and sanding equipment safely, lumber characteristics, gluing and clamping techniques, filing and chiseling and fasteners. Students will fabricate free standing woodworking projects.</p> <p><i>Note: Completion of the degree or certificate requirements qualifies students to receive a maximum of two years credit toward the California State Contractor's License for the C-6 Cabinet, Millwork and Finish Carpentry examination.</i></p>
Prerequisite:	
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	1
Hours Laboratory (per week):	3
Outside Study Hours:	2
Total Course Hours:	72
Course Units:	2
Grading Method:	Letter Grade only
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	03/18/2013
Transfer UC:	No
Effective Date:	
General Education: ECC	
Term:	

	Other:	
	CSU GE:	
	Term:	
	Other:	
	IGETC:	
	Term:	
	Other:	
Student Learning Outcomes:	<p>SLO #1 Cross-Cut Plywood</p> <p>Using the panel saw, student will cross-cut plywood to specified dimensions.</p> <p>SLO #2 Rip Cut Lumber</p> <p>Using the table saw, student will rip lumber to predetermined widths.</p> <p>SLO #3 Edge Glue Lumber</p> <p>Student will edge-glue lumber to increase overall width.</p>	
Course Objectives:	<ol style="list-style-type: none"> 1. Complete a written comprehensive woodworking safety test with 100% accuracy. 2. Set-up table saw and rip plywood. 3. Set-up panel saw and crosscut plywood. 4. Assemble a butt joint. 5. Demonstrate gluing procedure for butt joints. 6. Demonstrate use of clamping cauls such that pressure is distributed uniformly. 7. Interpret perspective cabinet drawings. 	
Major Topics:	<p>I. OVERVIEW OF GENERAL CABINET MAKING (1 hour, lecture)</p> <ol style="list-style-type: none"> A. Shop procedures B. Vendors and suppliers C. Resources and references <p>II. OVERVIEW OF GENERAL CABINET MAKING (3 hours, lab)</p> <ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> A. Cages and storerooms B. Toolroom C. Clamping and gluing area D. Finishing room E. Proper lab organization F. Clean-up procedures <p>III. SAFETY (1 hour, lecture)</p> <ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> A. Proper operation of woodworking equipment B. Safety procedures 	

C. Safety test

IV. SAFETY (6 hours, lab)

- A. Proper operation of woodworking equipment
- B. Safety concerns
- C. Safe lab practices

V. LUMBER (1 hour, lecture)

- 1.
 - A. Availability
 - B. Characteristics
 - C. Grading system
 - D. Defects
 - E. Calculating board feet

VI. LUMBER (3 hours, lab)

- 1.
 - A. Identifying defects
 - B. Analyzing usability
 - C. Determining grade
 - D. Calculating board feet
 - E. Estimating cost

VII. SURFACING MACHINES (1 hour, lecture)

- A. Joiner
 - 1. Safety review
 - 2. Capacity
 - 3. Capabilities
 - 4. Adjustments
- B. Thickness planer
 - 1. Safety review
 - 2. Capacity
 - 3. Capabilities
 - 4. Adjustments

VIII. SURFACING MACHINES (3 hours, lab)

- A. Jointer
 - 1. Surface face
 - 2. Surface edges
- B. Planer
 - 1. The planning sequence
 - 2. Surface rough face
 - 3. Surface jointed face

IX. ROUGH HARDWOOD LUMBER (1 hour, lecture)

- A. Kiln dried
- B. Air dried
- C. Warpage
- D. Squaring procedure
- E. Ring orientation
- F. Gluing and clamping

X. ROUGH HARDWOOD LUMBER (6 hours, lab)

- 1.
 - A. Select material
 - B. Identify warpage
 - C. Choose procedure to correct
 - D. Square six sides
 - E. Arrange ring orientation
 - F. Following gluing and clamping procedure

XI. TABLE SAWS (1 hour, lecture)

- 1.
 - A. Safety procedures
 - B. Type
 - C. Size
 - D. Primary use
 - E. Blades

XII. TABLE SAWS (3 hours, lab)

- 1.
 - A. Safety procedures
 - B. Selecting the correct blade
 - C. Changing blades correctly
 - D. Ripping procedure
 - E. Cross cutting miter gauge
 - F. Cross cutting clearance

XIII. BAND SAW (1 hour, lecture)

- 1.
 - A. Safety procedures
 - B. Blade storage
 - C. Blade selection
 - D. Size
 - 1. Width
 - 2. Length
 - 3. Gauge
 - 4. Tooth style
 - 5. Tooth spacing
 - E. Cuts
 - 1. Rough
 - 2. Straight finish
 - 3. Curves

4. Resawing
5. Round
6. Preparation for turning

XIV. BAND SAW (6 hours, lab)

- A. Safety procedures, performing pre-use safety inspection
- B. Selecting and installing appropriate blades and demonstrate cuts
 1. Rough
 2. Straight finish
 3. Curves
 4. Resaw
 5. Round
 6. Preparation for turning

XV. WOOD LATHE (3.5 hours, lecture)

1.
 - A. Identifying lathe parts
 - B. Methods of operation
 - C. Tool selection
 - D. Mounting stock
 - E. Turning techniques

XVI. WOOD LATHE (9 hours, lab)

- A. Selecting tooling, mounting styles and demonstrating:
 1. Between center
 2. Spindle
 3. Mandrel
 4. 4 jaw chuck
- B. Face plate
 1. Bowl
 2. Hollow form

XVII. ROUTERS (3 hours, lecture)

- A. Bits
 1. Edge forming
 2. Groove
- B. Standard handheld
 1. Edge forming
 2. Grooving
- C. Plunge router
 1. Templates
 2. Profile

XVIII. OUTERS (6 hours, lab)

- A. Standard router
 - 1. Selecting bit
 - 2. Edge profile
 - 3. Groove using template guide
 - 4. Groove using edge guide
 - 5. Direction of feed
- B. Plunge router
 - 1. Create profile templates
 - 2. Route profile
 - 3. Create interior template
 - 4. Route interior cut
 - 5. Direction of feed

XIX. ROUTER TABLE (1.5 hours, lecture)

- A. Set-up
 - 1. Guards
 - 2. Fence
 - 3. Feather boards
 - 4. Feed direction
- B. Router bit types

XX. ROUTER TABLE (3 hours, lab)

- A. Route edge profile sample
 - 1. Standard fence
 - 2. Zero clearance fence
- B. Route groove sample

XXI. POWER SANDERS (3 hours, lecture)

- A. Stationary
 - 1. Belt installation
 - 2. Table adjustment
 - 3. Technique
- B. Handheld
 - 1. ½ and ¼ sheet finish
 - 2. Random orbit
 - 3. Belt
- C. Abrasives
 - 1. Grade
 - 2. Type

XXII. POWER SANDERS (6 hours, lab)

- A. Stationary sanders
 - 1. Adjustments
 - 2. Technique
- B. Handheld
 - 1. Selecting and installing appropriate abrasive
 - 2. Demonstrate correct technique for:
 - a. Belt

	b. Random orbit c. ½ and ¼ sheet
Total Lecture Hours:	18
Total Laboratory Hours:	54
Total Hours:	72
Primary Method of Evaluation:	3) Skills demonstration
Typical Assignment Using Primary Method of Evaluation:	Identify position of dado cuts and face frame alignments to create the dado joints to construct a storage box. When completed, consult the instructor for evaluation.
Critical Thinking Assignment 1:	Cut straight and parallel boards on a table saw to prepare material for edge gluing to increase width of a panel. When completed, consult the instructor for evaluation.
Critical Thinking Assignment 2:	Using a band saw, reference the Plan of Procedure to make cuts in the correct order to fabricate a push stick. Submit push stick to the instructor.
Other Evaluation Methods:	Class Performance Objective Exam Performance Exams
Instructional Methods:	Demonstration Laboratory Lecture
If other:	
Work Outside of Class:	Required reading Other (specify) Research
If Other:	
Up-To-Date Representative Textbooks:	Patrick Molzahn, William Umstattd and Charles Davis. <u>MODERN CABINETMAKING</u> . Goodheart Willcox Publishers, 6 th edition, 2023
Alternative Textbooks:	
Required Supplementary Readings:	
Other Required Materials:	Safety glasses Ear plugs Dust mask Closed toe shoes
Requisite:	
Category:	

Requisite course(s): List both prerequisites and corequisites in this box.	
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	
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Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Jack Selph
Date:	10/09/2012
Original Board Approval Date:	03/18/2013
Last Reviewed and/or Revised by:	Jack Selph
Date:	02/15/2023
Last Board Approval Date:	07/17/2023 effective FALL 2024