



El Camino College
COURSE OUTLINE OF RECORD – Official

Course Acronym:	CTEC
Course Number:	202
Descriptive Title:	Base Residential Cabinets
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 properties of wood and wood products, the fabrication and installation of base residential cabinets, correct construction techniques for load bearing cabinets, appropriate use of toe kicks, and use of sub tops for multiple types of counter top materials.</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 Hardwood Milling</p> <p>Student will mill hardwood lumber and lay it out for biscuit joints.</p> <p>SLO #2 Plate Jointer Setup</p> <p>Student will set up plate jointer for ¾" material thickness.</p> <p>SLO #3 Biscuit Joint Machining</p> <p>Using the plate jointer, student will machine for biscuit joints.</p>	
Course Objectives:	<ol style="list-style-type: none"> 1. Complete a written comprehensive woodworking safety test with 100% accuracy. 2. Demonstrate use of band saw to cut kick plates. 3. Demonstrate the gluing procedure used on a dado joint. 4. Assemble dowel and face frames. 5. Set-up and use line boring machine. 6. Compare and contrast the most common materials used in base residential cabinet construction. 7. Join lumber to increase width and change grain direction. 8. Machine a dado joint. 9. Interpret perspective cabinet drawings. 	
Major Topics:	<p>I. OVERVIEW OF BASE RESIDENTIAL CABINETS (1 hour, lecture)</p> <ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> A. Shop procedures B. Vendors and suppliers C. Resources and references <p>II. OVERVIEW OF BASE RESIDENTIAL CABINETS (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 (2 hours, lecture)</p> <ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> A. Safety procedures 	

B. Safety test

IV. SAFETY (6 hours, lab)

1.
 - A. Proper operation of woodworking equipment
 - B. Safety concerns
 - C. Safe lab practices

V. BASE RESIDENTIAL CABINET DESIGN (1 hour, lecture)

1.
 - A. General specifications
 - B. Special applications
 - C. Design
 - D. Orthographic projection
 - E. Dimensioning

VI. BASE RESIDENTIAL CABINET DESIGN (3 hours, lab)

1.
 - A. Creating design
 - B. Producing drawing
 - C. Dimensioning cabinet

VII. MATERIALS (2 hours, lecture)

1.
 - A. Selection
 - B. Characteristics
 - C. Defects
 - D. Correction techniques
 - E. Surfacing procedure

VIII. MATERIALS (6 hours, lab)

1.
 - A. Selecting rough stock
 - B. Identifying defects
 - C. 7-step procedure to correct rough stock

IX. BASE FACE FRAME (1 hour, lecture)

1.
 - A. Milling procedure
 - B. Joint selection

X. BASE FACE FRAME (3 hours, lab)

1.
 - A. Dimensioning of stock
 - B. Fabrication of joints

- C. Gluing and clamping
- D. Squaring

XI. CASEWORK SHEET GOODS (2 hours, lecture)

- 1.
 - A. Plywood
 - B. Medium Density Fiberboard (MDF)
 - C. Melamine
 - D. Grades

XII. CASEWORK SHEET GOODS (6 hours, lab)

- 1.
 - A. Proper handling techniques
 - B. Table saw ripping techniques
 - C. Panel saw cross cutting
 - D. Final dimensioning

XIII. JOINTS (2 hours, lecture)

- 1.
 - A. Dado
 - B. Blind dado
 - C. Rabbet
 - D. Rabbet dado
 - E. Miter

XIV. JOINTS - SETTING UP AND MACHINING (6 hours, lab)

- 1.
 - A. Dado
 - B. Blind dado
 - C. Rabbet
 - D. Rabbet dado
 - E. Miter

XV. PLACEMENT AND PURPOSE OF DRAWERS AND ROLL-OUT SHELVES (1 hour, lecture)

- 1.
 - A. Proportions
 - B. Style
 - C. Use

XVI. PLACEMENT AND PURPOSE OF DRAWERS AND ROLL-OUT SHELVES (3 hours, lab)

- 1.
 - A. Selecting appropriate type
 - B. Milling
 - C. Installing

XVII. ROUGH ASSEMBLY PROCEDURE (2 hours, lecture)

1.
 - A. Glues
 - B. Mechanical fasteners
 - C. Biscuits
 - D. Screws, nails and staples
 - E. Clamping
 - F. Squaring technique

XVIII. ROUGH ASSEMBLY PROCEDURE (6 hours, lab)

1.
 - A. Dry fit
 - B. Selecting glue and fastening techniques
 - C. Assembling
 - D. Clamping techniques
 - E. Final squaring

XIX. FINAL FIT (2 hours, lecture)

1.
 - A. Flush trimming technique
 - B. Sanding techniques
 - C. Detail routing techniques

XX. FINAL FIT (6 hours, lab)

1.
 - A. Flush trim
 - B. Sand
 - C. Detail routing

XXI. INSTALLATION PREPARATION (3 hours, lab)

1.
 - A. Installation of support members
 - B. Cutting, fitting and installing hanging strips
 - C. Preparing and installing back
 - D. Milling, scribing and other trim molding

XXII. INSTALLATION PREPARATION (1 hour, lecture)

1.
 - A. Installation of support members
 - B. Cutting fitting and installing hanging strips
 - C. Preparing and installing back
 - D. Milling, scribing and other trim molding

XXIII. JIGS AND FIXTURES UNIQUE TO BASE RESIDENTIAL CABINETS (3 hours, lab)

	<ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> A. Designing a jig as alternate method of cutting B. Fabrication of jigs C. Machining joints <p>XXIV. JIGS AND FIXTURES UNIQUE TO BASE RESIDENTIAL CABINETS (1 hour, lecture)</p> <ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> A. Use B. Design C. Construction
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:	Calculate the board footage of hardwood components from a detailed drawing. Record calculations on the working drawing and submit to the instructor.
Critical Thinking Assignment 1:	Design a base residential cabinet and submit a drawing complete with dimensions and specifications to the instructor.
Critical Thinking Assignment 2:	Referencing a Bill of Material (BOM), calculate the amount and cost of materials to be consumed for the fabrication of a base residential cabinet. Record the cost of materials on the BOM and submit to the instructor.
Other Evaluation Methods:	
Instructional Methods:	Demonstration Laboratory Lecture
If other:	
Work Outside of Class:	Study Skill practice Required reading
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