I. GENERAL COURSE INFORMATION

Subject and Number: Construction Technology 200
Descriptive Title: General Cabinet Making
Course Disciplines: Cabinet Making
Division: Industry and Technology

Catalog Description:
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.

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.

Conditions of Enrollment:
You have no defined requisites.

Course Length:	**X Full Term**	**Other (Specify number of weeks):**
Hours Lecture:	**1.00 hours per week**	**TBA**
Hours Laboratory:	**3.00 hours per week**	**TBA**
Course Units:	**2.00**	

Grading Method: Letter
Credit Status: Associate Degree Credit

Transfer CSU: X Effective Date: 3/18/2013
Transfer UC: No Effective Date:

General Education:
El Camino College:
GSU GE:
IGETC:

II. OUTCOMES AND OBJECTIVES

A. COURSE STUDENT LEARNING OUTCOMES (The course student learning outcomes are listed below, along with a representative assessment method for each. Student learning outcomes are not subject to review, revision or approval by the College Curriculum Committee)

1. SLO #1 Cross-Cut Plywood Using the panel saw, student will cross-cut plywood to specified dimensions.
2. SLO #2 Rip Cut Lumber Using the table saw, student will rip lumber to predetermined widths.
3. SLO #3 Edge Glue Lumber Student will edge-glue lumber to increase overall width.

The above SLOs were the most recent available SLOs at the time of course review. For the most current SLO statements, visit the El Camino College SLO webpage at http://www.elcamino.edu/academics/slo/.

B. Course Student Learning Objectives (The major learning objective for students enrolled in this course are listed below, along with a representative assessment method for each)

A. Complete a written comprehensive woodworking safety test with 100% accuracy.
- Objective Exams

B. Set-up table saw and rip plywood.
- Class Performance

C. Set-up panel saw and crosscut plywood.
- Class Performance

D. Assemble a butt joint.
- Class Performance

E. Demonstrate gluing procedure for butt joints.
- Class Performance

F. Demonstrate use of clamping cauls such that pressure is distributed uniformly.
- Class Performance

G. Interpret perspective cabinet drawings.
- Written homework

III. OUTLINE OF SUBJECT MATTER (Topics are detailed enough to enable a qualified instructor to determine the major areas that should be covered as well as ensure consistency from instructor to instructor and semester to semester.)

Lecture or Lab	Approximate Hours	Topic Number	Major Topic
Lecture	1	I	OVERVIEW OF GENERAL CABINET MAKING A. Shop procedures B. Vendors and suppliers C. Resources and references
Lab	3	II	OVERVIEW OF GENERAL CABINET MAKING A. Cages and storerooms B. Tool room C. Clamping and gluing area D. Finishing room E. Proper lab organization F. Clean-up procedures
Lecture	1	III	SAFETY A. Proper operation of woodworking equipment B. Safety procedures C. Safety test
Lab	6	IV	SAFETY A. Proper operation of woodworking equipment B. Safety concerns C. Safe lab practices
Lecture	1	V	LUMBER A. Availability B. Characteristics C. Grading system D. Defects E. Calculating board feet
Lab	3	VI	LUMBER A. Identifying defects B. Analyzing usability C. Determining grade D. Calculating board feet E. Estimating cost
Lecture	1	VII	SURFACING MACHINES A. Joiner 1. Safety review 2. Capacity 3. Capabilities 4. Adjustments B. Thickness planer 1. Safety review 2. Capacity 3. Capabilities 4. Adjustments

Lab	3	VIII	SURFACING MACHINES A. Jointer 1. Surface face 2. Surface edges B. Planer 1. The planning sequence 2. Surface rough face 3. Surface jointed face
Lecture	1	IX	ROUGH HARDWOOD LUMBER A. Kiln dried B. Air dried C. Warpage D. Squaring procedure E. Ring orientation F. Gluing and clamping
Lab	6	X	ROUGH HARDWOOD LUMBER 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
Lecture	1	XI	TABLE SAWS A. Safety procedures B. Type C. Size D. Primary use E. Blades
Lab	3	XII	TABLE SAWS A. Safety procedures B. Selecting the correct blade C. Changing blades correctly D. Ripping procedure E. Cross cutting miter gauge F. Cross cutting clearance
Lecture	1	XIII	BAND SAW 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
Lab	6	XIV	BAND SAW 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
Lecture	3.5	XV	WOOD LATHE A. Identifying lathe parts B. Methods of operation C. Tool selection D. Mounting stock E. Turning techniques
Lab	9	XVI	WOOD LATHE A. Selecting tooling and mounting styles and demonstrating: 1. Between center 2. Spindle 3. Mandrel 4. 4 jaw chuck B. Face plate 1. Bowl 2. Hollow form
Lecture	3	XVII	ROUTERS A. Bits 1. Edge forming 2. Groove B. Standard handheld 1. Edge forming 2. Grooving C. Plunge router 1. Templates 2. Profiles
Lab	6	XVIII	ROUTERS 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
Lecture	1.5	XIX	ROUTER TABLE A. Set-up 1. Guards 2. Fence 3. Feather boards 4. Feed direction B. Router bit types
Lab	3	XX	ROUTER TABLE A. Route edge profile sample 1. Standard fence 2. Zero clearance fence B. Route groove sample
Lecture	3	XXI	POWER SANDERS 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
Lab	6	XXII	POWER SANDERS 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	

IV. PRIMARY METHOD OF EVALUATION AND SAMPLE ASSIGNMENTS

A. PRIMARY METHOD OF EVALUATION
Skills Demonstration

B. 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.

C. COLLEGE-LEVEL CRITICAL THINKING ASSIGNMENTS:
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.

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.

D. OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS:
Performance exams
Objective Exams
Class Performance

V. INSTRUCTIONAL METHODS
Demonstration
Laboratory
Lecture

Note: In compliance with Board Policies 1600 and 3410, Title 5 California Code of Regulations, the Rehabilitation Act of 1973, and Sections 504 and 508 of the Americans with Disabilities Act, instruction delivery shall provide access, full inclusion, and effective communication for students with disabilities.

VI. WORK OUTSIDE OF CLASS
Study
Skill practice
Required reading

Estimated Independent Study Hours per Week: 2

VII. TEXTS AND MATERIALS

A. UP-TO-DATE REPRESENTATIVE TEXTBOOKS
William Umstattd and Charles Davis. MODERN CABINET MAKING. Goodheart Willcox Publishers, 2016.

B. ALTERNATIVE TEXTBOOKS

C. REQUIRED SUPPLEMENTARY READINGS

D. OTHER REQUIRED MATERIALS
Safety glasses
Ear plugs
Dust mask
Closed toe shoes

VIII. CONDITIONS OF ENROLLMENT

A. Requisites (Course and Non-Course Prerequisites and Corequisites)

Requisites	Category and Justification

B. Requisite Skills

Requisite Skills

C. Recommended Preparations (Course and Non-Course)

Recommended Preparation	Category and Justification

D. Recommended Skills

Recommended Skills

E. Enrollment Limitations

Enrollment Limitations and Category	Enrollment Limitations Impact

Course created by **Jack Selph on 10/09/2012.**

BOARD APPROVAL DATE: **03/18/2013**

LAST BOARD APPROVAL DATE: **05/21/2019**

Last Reviewed and/or Revised by: **JACK SELPH** **Date: 3/14/2019**

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