ART A116: FURNITURE MAKING AND DESIGN

Item	Value
Curriculum Committee Approval Date	12/08/2021
Top Code	100200 - Art
Units	4 Total Units
Hours	108 Total Hours (Lecture Hours 54; Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S)
Associate Arts Local General Education (GE)	• Area 3 Arts and Humanities 3B Active Participation (OC2)
Associate Science Local General Education (GE)	• Area 3A Arts (OSC1)

Course Description

The student will design, construct, and manufacture furniture and related products. Enrollment Limitation: CNST A116; students who complete ART A116 may not enroll in or receive credit for CNST A116. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Produce a piece of residential furniture that shows command of a series of complimentary joinery systems and surface finishing techniques.

Course Objectives

- 1. Design and draft simple plans for a progressive series of primarily wood objects using simple drawing tools such a s grid paper, divides, pencils and measuring tools.
- 2. Select appropriate lumber and wood products as a building material by engineering a project within the structural limitations of the material.
- 3. Demonstrate basic and intermediate physical skills mastery of traditional woodworking techniques and joint-based construction methods.
- 4. Demonstrate ability to control and modify surface textures and colors using non-commercial finishing equipment.
- 5. Recognize elements of product manufacture using related signatures of sound design and progressive engineering practices.
- 6. Exhibit the appropriate uses of furniture making resources, written and oral, to solve a variety of domestic use and industrial design dilemmas.
- 7. Analyze design criteria and draw upon their own training and experience to apply traditional and innovative proposals that are sustainable by a workforce and attractive to any potential client.
- 8. Evaluate future career growth within the domestic furniture marketplace and have the ability to adjust the capabilities of the small woodworking studio to accommodate any important transitions.
- 9. Evaluate the artistic and intrinsic value that can be added to a finished product by sound use of the tools, techniques, and skills acquired in the academic setting.

Lecture Content

INTRODUCTION Safety Hand Tools Machine Tools General Safety DESIGN Lecture Sketching/drawing Proportion Colors/Textures Laboratory Freehand renderings Orthographic and Isometric renderings Shading and Coloring WOOD IDENTIFICATION Lecture only Hardwoods Softwoods Man-made wood products Selection Conservation USE OF MACHINES/TOOLS Lecture Dimensioning/Sizing Finish Preparation Laboratory Squaring Stock Planning and Surfacing SHARPENING Lecture/demonstration Hand Tools Power Tools Laboratory Plane Irons and Chisels Hand Saws Hand Scrapers JOINERY Lecture/demonstration Hand Techniques Machine Made Joints Industrial Fasteners Laboratory Edge Joint Mortise and Tendon Joint Dovetail Joint CABINETRY AS FINE FURNITURE Lecture/demonstration Frame and Panel Post and Rail Board Construction Laboratory Construct a frame and panel Construct a post and rail Construct a board panel DOOR AND DRAWER CONSTRUCTION Lecture/demonstration Survey of box making joinery Joint selection and use Laboratory Dovetail a drawer Production drawer making techniques Make a curved drawer and door LIMITED PRODUCTION CABINET MAKIN G Lecture/demonstration Production set-ups Production box making Small batch estimating and job costing SEATING FURNITURE Lecture/ demonstration Chairs and stools Sofas and Settees Benches and outdoor seating Laboratory- continued work on lab projects CHAIR AND STOOL MAKING Lecture/demonstration Wood selection Stock preparation Joinery techniques Laboratory - continue work on lab projects SOFA AND SETTEE CONSTRUCTION Lecture/demonstration Framework Suspension options Elementary upholstery OUTDOOR FURNITURE Lecture/demonstration Wood selection Bench design Wood treatment Laboratory- continue work on lab projects FURNITURE GRADE MILLWORK Lecture/demonstration Moulding Wainscoting/ chair rail Fireplace surrounds Laboratory Make custom moulding samples Make tongue and groove wainscoting FINISHES AND FINISHING TECHNIQUES Lecture/demonstration Surface preparation Film finishes Penetrating finishes Laboratory Sample preparation Hand applied finishes Sprayed finishes PROJECT COMPLETION Lecture/demonstration Assist students on an as needed basis Laboratory Complete assigned projects PROJECT COMPLETION CONTINUED Lecture/demonstration Review Final Examination Open Laboratory Complete assigned projects Make-up incomplet e labs Taking the course four times enhances skills by supervised repetition.

Lab Content

INTRODUCTION Safety Hand Tools Machine Tools General Safety DESIGN Lecture Sketching/drawing Proportion Colors/Textures Laboratory Freehand renderings Orthographic and Isometric renderings Shading and Coloring WOOD IDENTIFICATION Lecture only Hardwoods Softwoods Man-made wood products Selection Conservation USE OF MACHINES/TOOLS Lecture Dimensioning/Sizing Finish Preparation Laboratory Squaring Stock Planning and Surfacing SHARPENING Lecture/demonstration Hand Tools Power Tools Laboratory Plane Irons and Chisels Hand Saws Hand Scrapers JOINERY Lecture/demonstration Hand Techniques Machine Made Joints Industrial Fasteners Laboratory Edge Joint Mortise and Tendon Joint Dovetail Joint CABINETRY AS FINE FURNITURE Lecture/demonstration Frame and Panel Post and Rail Board

Construction Laboratory Construct a frame and panel Construct a post and rail Construct a board panel DOOR AND DRAWER CONSTRUCTION Lecture/demonstration Survey of box making joinery Joint selection and use Laboratory Dovetail a drawer Production drawer making techniques Make a curved drawer and door LIMITED PRODUCTION CABINET MAKIN G Lecture/demonstration Production set-ups Production box making Small batch estimating and job costing SEATING FURNITURE Lecture/ demonstration Chairs and stools Sofas and Settees Benches and outdoor seating Laboratory- continued work on lab projects CHAIR AND STOOL MAKING Lecture/demonstration Wood selection Stock preparation Joinery techniques Laboratory - continue work on lab projects SOFA AND SETTEE CONSTRUCTION Lecture/demonstration Framework Suspension options Elementary upholstery OUTDOOR FURNITURE Lecture/demonstration Wood selection Bench design Wood treatment Laboratory- continue work on lab projects FURNITURE GRADE MILLWORK Lecture/demonstration Moulding Wainscoting/ chair rail Fireplace surrounds Laboratory Make custom moulding samples Make tongue and groove wainscoting FINISHES AND FINISHING TECHNIQUES Lecture/demonstration Surface preparation Film finishes Penetrating finishes Laboratory Sample preparation Hand applied finishes Sprayed finishes PROJECT COMPLETION Lecture/demonstration Assist students on an as needed basis Laboratory Complete assigned projects PROJECT COMPLETION CONTINUED Lecture/demonstration Review Final Examination Open Laboratory Complete assigned projects Make-up incomplet e labs Taking the course four times enhances skills by supervised repetition.

Method(s) of Instruction

- Lecture (02)
- Lab (04)

Instructional Techniques

1. In-depth lectures and demonstrations of furniture making processes and techniques. 2. Lecture series on design from a contemporary perspective. 3. Instructor will bring samples of current work from each category covered. 4. Supplemental viewing by slide presentations of pieces from selected galleries and private collections. 5. Detailed illustrated parts break-downs of classic pieces on student handouts.

Reading Assignments

.

Writing Assignments

The course of study will develop proficiencies in machine and hand tool skills necessary to be designer/builder. Written essays will concentrate on the historical perspective of problem solving relating to the design of all types of furniture.

Out-of-class Assignments

.

Demonstration of Critical Thinking

Juried critiques of design concepts and processes with instructor and guest professionals. Evaluation and critique of drawings and concept statements. The instructor will assign grades to all assignments and all pieces of furniture completed during the semester.

Required Writing, Problem Solving, Skills Demonstration

The course of study will develop proficiencies in machine and hand tool skills necessary to be designer/builder. Written essays will concentrate on the historical perspective of problem solving relating to the design of all types of furniture.

Textbooks Resources

1. Required Pye, David. The Art an Nature of Workmanship, ed. CT: Cambium Press, 1995 Rationale: latest 2. Required Woodwork Institute of California. Manual of Millwork, 11th revised ed. -, 2004 Rationale: -