**Title:** Introduction To Design Materials And Technical Processes

**Semester Units:** 3.0

**Contact Hrs Total:** 90.0

**Study Non-Contact Hrs Recommended:** 72.0

**Catalog Description:**
This is an introductory hands-on course that enables students to apply their design ideas to plastics, wood and metal. Appropriate safety instruction for both hand and basic power tools is included. Lectures include information on safety, machine operation, basic materials, processes, fasteners, adhesives and finishes.

**Justification For Course:**

**Prerequisites:**

**Corequisites:**

**Advisories:**

**Assigned Disciplines:**
- Drafting CADD (computer-aided drafting/design)
- CAD (computer-aided design)
- Industrial design

**Material Fee:** Yes [X] No [ ] Amount: $19.00

**Credit Status:** Noncredit [ ] Credit - Degree Applicable [X] Credit - Not Degree Applicable [ ]

**Grading Policy:** Pass/No Pass [X] Standard Letter [X] Not Graded [ ] Satisfactory Progress [ ]

**Open Entry/Open Exit:** Yes [ ] No [X]

**Transfer Status:** CSU Transferable[X] UC/CSU Transferable[ ] Not Transferable[ ]

**Basic Skills Status:** Yes [X] No [ ]

**Levels Below Transfer:** Not Applicable

**California Classification Codes:** Y - Not Applicable

**Non Credit Course Category:** Y - Not applicable, Credit Course

**Occupational (SAM) Code:** C

**Repeatable According to State Guidelines:** No [X] Yes [ ]

**Number Repeats:**

**Required For Degree Or Certificate:** No [ ] Yes [X]

**Associate of Arts: Liberal Arts: Emphasis in Business and Technology(Associate in Arts) Design(Certificate of Achievement) GE And Transfer Requirements Met:**

**Course Level Student Learning Outcome(S) Supported by this course:**
1. perform the tasks necessary to pass a safety test.

2. design a studio lab.

3. explain precision measurement used in Design.

4. interpret the use of basic materials, processes, fasteners, adhesives, and finishes used in the studio lab.

5. explain the safe and proper usage of the hand, portable power, and basic stationary power equipment used in the studio lab.

6. generate fundamental lab projects utilizing the tools and equipment in the studio lab.

7. apply independent design ideas to basic required projects.

8. demonstrate the technical knowledge, attitude, and habits conducive to attaining a successful career in design.

COURSE OBJECTIVES:

1. Pass a safety test.
2. Understand and design a studio lab.
3. Understand lab safety and procedures.
4. Understand precision measurement used in Design.
5. Develop the technical knowledge, attitude and habits conducive to attaining a successful career in design.
6. Understand basic materials, processes, fasteners, adhesives and finishes used in the studio lab.
7. Understand the safe and proper usage of the hand, portable power and basic stationary power equipment used in the studio lab.
8. Complete fundamental lab projects utilizing the tools and equipment in the studio lab.
9. Apply independent design ideas to basic required projects.

COURSE CONTENT:

LECTURE CONTENT:

1. Orientation to the design studio lab
2. Lab safety procedures and appropriate campus safety policies
3. Precision measurement and measuring instruments
4. Proper use of basic hand tools, safety and lab protocol
5. Proper use of basic portable power equipment
6. Proper use of basic stationary power equipment
7. Introduction to basic materials used in Design
8. Introduction to basic fasteners
9. Introduction to adhesives
10. Introduction to basic finishing processes used in Design
11. Introduction to safe plan of procedures in working on basic projects
12. Creativity and Ideation

LABORATORY CONTENT:

METHODS OF INSTRUCTION:

A. Lecture:
B. Lab:
C. Independent Study:

INSTRUCTIONAL TECHNIQUES:
COURSE ASSIGNMENTS:
Reading Assignments
Lecture notes and instructor handouts.
Current text.

Out-of-class Assignments
Research Library Media Center or Internet.

Writing Assignments
Complete a process required for each project.
Analyze, apply, and solve design problems requiring the knowledge, skills and techniques covered in class lectures, demonstrations, activities and research.
Critique presentation.
Demonstrate skills through safe and proper usage of tools and equipment in studio lab.
Complete basic projects.
Compile class notebook and project preparation for portfolio.

METHODS OF STUDENT EVALUATION:
Midterm Exam
Final Exam
Short Quizzes
Written Assignments
Projects (ind/group)
Problem Solving Exercises
Skills Demonstration

Demonstration of Critical Thinking:
The student will explain to the instructor's satisfaction when certain techniques taught in class and covered in the reading assignments are used to full potential during presentations.
The student will apply critical thinking/problem solving skills to their basic class projects.

Required Writing, Problem Solving, Skills Demonstration:
Complete a process required for each project.
Analyze, apply, and solve design problems requiring the knowledge, skills and techniques covered in class lectures, demonstrations, activities and research.
Critique presentation.
Demonstrate skills through safe and proper usage of tools and equipment in studio lab.
Complete basic projects.
Compile class notebook and project preparation for portfolio.

TEXTS, READINGS, AND RESOURCES:
TextBooks:
Other:
1. Instructor prepared materials.
   Research Library Media Center or Internet
   Class syllabus
   Respirator
   Project materials
   Project related lab supplies

LIBRARY:
   Adequate library resources include:

Comments:

Attachments:
   Attached Files