ORIGINATOR: Gregory Wight
CROSS LISTED COURSE:

SEMESTER UNITS: 3.0
HRS LEC: 36.0 HRS LAB: 54.0 HRS OTHER: 0.0
CONTACT HRS TOTAL: 90.0
STUDY NON-CONTACT HRS RECOMMENDED: 72.0

CATALOG DESCRIPTION:
This course provides an introduction to manual and computer aided drafting. Includes descriptive geometry; mechanism sketching; orthographic and isometric drafting; blueprint reading, printing and plotting.

JUSTIFICATION FOR COURSE:

PREREQUISITES:

COREQUISITES:

ADVISORIES:

ASSIGNED DISCIPLINES:
Drafting CADD (computer-aided drafting/design), CAD (computer-aided design), CAD (computer-aided drafting)
Industrial design

MATERIAL FEE: Yes [X] No [ ] Amount: $3.50

CREDIT STATUS: Noncredit [ ] Credit - Degree Applicable [X] Credit - Not Degree Applicable [ ]

GRADING POLICY: Pass/No Pass [ ] Standard Letter [X] Not Graded [ ] Satisfactory Progress [ ]

OPEN ENTRY/OPEN EXIT: Yes [ ] No [X]

TRANSFER STATUS: CSU Transferable[ ] UC/CSU Transferable[X] Not Transferable[ ]

BASIC SKILLS STATUS: Yes [ ] No [X] 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. identify and use the basic ANSI, ISO, and industry standards.
2. demonstrate proficiency in the use of the CAD menus and files.
3. demonstrate the ability to think in three dimensions.
4. generate fundamental lab drawings using hand and CAD drawing techniques.
5. apply independent design ideas to required projects where applicable.

COURSE OBJECTIVES:
1. develop the ability to think in three dimensions.
2. learn to use the basic ANSI, ISO, and industry standards.
3. utilize Computer Aided Drawing (CAD) software and the personal computer by drawing techniques.
4. gain proficiency in the use of the CAD menus and files.
5. complete fundamental lab drawings using hand and CAD drawing techniques.
6. apply independent design ideas to required projects where applicable.

COURSE CONTENT:

LECTURE CONTENT:
1. Design lettering as it applies to the Design drafting course.
2. Accrue the technical knowledge, attitude and habits conducive to attaining a successful career in design
3. Technical and mechanism sketching as they apply to the Design drafting course.
4. Use of instruments as they apply to the Design drafting course.
5. Precision measurement and measuring instruments in drafting as it applies to the Design drafting course.
6. Geometric construction as it applies to the Design drafting course.
7. Templates, ellipses, sweeps and curves as they apply to the Design drafting course.
8. Orthographic multi view projections as they apply to the Design drafting course.
9. Blueprint reading as it applies to the Design drafting course.
10. Oblique, axonometric and perspectives as they apply to the Design drafting course.
11. Sections as they apply to the Design drafting course.
12. Basic descriptive geometry as it applies to the Design drafting course.
13. Auxiliary views as they apply to the Design drafting course.
14. Title blocks and notes as they apply to the Design drafting course.
15. Basic dimensioning as it applies to the Design drafting course.
16. Precision dimensioning and tolerances as they apply to the Design drafting course.
17. Basic geometric dimensioning and tolerances as they apply to the Design drafting courses.
18. Use of drafting standards; Military, ANSI, ISO.
19. Introduction to Computer Aided Drafting CAD.
20. Introduction to basic materials and call outs.
21. Basic threads and fasteners as they apply to the Design drafting course.
22. Knurls basics as they apply to the Design drafting course.
23. Gears basics as they apply to the Design drafting course.
24. Assembly drawings as they apply to the Design drafting course.

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 covering fundamentals of drafting and blueprint reading

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

Writing Assignments
Analyze, apply and solve design problems requiring the knowledge, skills and techniques covered in class lectures, demonstrations, activities and research assignments.
Demonstrate skills through safe and proper usage of tools and equipment to drafting lab.
Complete assigned drawing problems requiring the special techniques taught in class.
Complete a 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 why certain techniques taught in class and covered in the reading assignments are used to solve each assigned drawing.
The student will apply critical thinking/problem solving skills to their class drawing.

Required Writing, Problem Solving, Skills Demonstration:
Analyze, apply and solve design problems requiring the knowledge, skills and techniques covered in class lectures, demonstrations, activities and research assignments.
Demonstrate skills through safe and proper usage of tools and equipment to drafting lab.
Complete assigned drawing problems requiring the special techniques taught in class.
Complete a class notebook and project preparation for portfolio.

TEXTS, READINGS, AND RESOURCES:
TextBooks:

Other:
1. Instructor prepared materials

LIBRARY:
Adequate library resources include:

Comments:

Attachments: