Number: DRAF G101  TITLE: Basic Computer Aided Design Drafting

ORIGINATOR: Larry Baird  EFF TERM: Summer 2010
FORMERLY KNOWN AS:  DATE OF OUTLINE/REVIEW: 05-04-2005
CROSS LISTED COURSE:  TOP NO: 0953.00

SEMESTER UNITS: 4.0  HRS LEC: 54.0  HRS LAB: 72.0  HRS OTHER: 0.0
CONTACT HRS TOTAL: 126.0
STUDY NON-CONTACT HRS RECOMMENDED: 108.0
CATALOG DESCRIPTION:
This lecture/lab course is a survey of the basic fundamentals of drafting using Computer Aided Drafting (CAD) and is designed to develop the ability to think in three dimensions and to interpret data from blueprints and sketches. The course includes: freehand sketching, use of dimensioning, multi-view projection, pictorial drawing, sectioning, and basic CAD menus.

JUSTIFICATION FOR COURSE:
PREREQUISITES:
COREQUISITES:
ADVISORIES:
ASSIGNED DISCIPLINES:
Drafting CADD (computer -aided drafting/ design), CAD (computer- aided design), CAD (computer-aided drafting)

MATERIAL FEE: Yes [ ] No [X] Amount: $0.00
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 [ ] 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)
Computer Aided Design and Drafting (two-year)(Certificate of Achievement)
Drafting Technology: Computer Aided Design and Drafting (CADD)(Associate in Arts)
Technical Drafting Option (one-year)(Certificate of Specialization)
GE AND TRANSFER REQUIREMENTS MET:
COURSE LEVEL STUDENT LEARNING OUTCOME(S) Supported by this course:
1. demonstrate basic drafting skills.
2. use basic functions of the CAD software.
3. generate simple isometric and multi-view projection drawings using CAD.
4. interpret and read blueprints using rudimentary skill.
5. generate freehand sketches of simple engineering drawings using rudimentary skill.
6. use the graphic language typically seen in mechanical drawing

COURSE OBJECTIVES:
1. Demonstrate basic drafting skills.
2. Utilize basic functions of the CAD software.
3. Draw simple isometric and multi-view projection drawings using CAD.
4. Utilize the graphic language typically seen in mechanical drafting.
5. Demonstrate rudimentary skill in reading and interpreting blueprints.
6. Demonstrate rudimentary skill in freehand sketching of simple engineering drawings.

COURSE CONTENT:

LECTURE CONTENT:

1. Orientation to CAD
   a. Hardware
   b. Software

2. CAD Desktop Layout
   a. Command menus and tool bars
   b. Graphic area
   c. Command

3. Drawings
   a. Layouts and visualization
   b. Model space
   c. Paper space

4. Geometric Construction
   a. Lines, arcs, and splines
   b. Projection of views
   c. Isometric views

5. Advanced Drawing Views
   a. Section views
   b. Auxiliary views
   c. Detail views

6. Dimensioning and Drawing Notes
   a. Dimension styles
   b. Text styles

LABORATORY CONTENT:

1. Orientation to CAD
   a. Hardware
   b. Software

2. CAD Desktop Layout
   a. Command menus and tool bars
b. Graphic area
c. Command

3. Drawings
   a. Layouts and visualization
   b. Model space
   c. Paper space

4. Geometric Construction
   a. Lines, arcs, and splines
   b. Projection of views
   c. Isometric views

5. Advanced Drawing Views
   a. Section views
   b. Auxiliary views
   c. Detail views

6. Dimensioning and Drawing Notes
   a. Dimension styles
   b. Text styles

METHODS OF INSTRUCTION:

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

INSTRUCTIONAL TECHNIQUES:

COURSE ASSIGNMENTS:
   Out-of-class Assignments

   Writing Assignments

   The student will use drawing assignments to demonstrate the ability to analyze and solve drawing problems.

   Reading Assignments

   1. Course textbook
   2. Lecture notes and instructor prepared handouts

METHODS OF STUDENT EVALUATION:

Midterm Exam
Final Exam
Short Quizzes
Written Assignments
Objective Examinations
Report
Projects (ind/group)
Problem Solving Exercises
Oral Presentations
Skills Demonstration
Demonstration of Critical Thinking:

Students will be required to:
1. Analyze the assigned drawing problems.
2. Identify the proper drafting techniques.
3. Demonstrate the required techniques.

Required Writing, Problem Solving, Skills Demonstration:

The student will use drawing assignments to demonstrate the ability to analyze and solve drawing problems.

TEXTS, READINGS, AND RESOURCES:

TextBooks:
1. Randy Shih. AutoCAD Tutorial 2D Fundamentals, ed. SDC Publications, 2004

LIBRARY:

Adequate library resources include:

Comments:

Attachments:

Attached Files