APTECH 56 Course Outline as of Fall 2007

CATALOG INFORMATION

Dept and Nbr: APTECH 56   Title: COMPUTER DRAFTING
Full Title: Introduction to Computer-Aided Drafting
Last Reviewed: 8/14/2023

Units			Course Hours per Week		Nbr of Weeks	Course Hours Total		
Maximum	2.00		Lecture Scheduled	2.00	8	Lecture Scheduled		16.00
Minimum	2.00		Lab Scheduled	3.00	4	Lab Scheduled		24.00
			Contact DHR	0		Contact DHR		0
			Contact Total	5.00		Contact Total		40.00
			Non-contact DHR	3.00		Non-contact DHR		24.00

Total Out of Class Hours: 32.00   Total Student Learning Hours: 96.00

Title 5 Category: AA Degree Applicable
Grading: Grade Only
Repeatability: 39 - Total 2 Times
Also Listed As:
Formerly: ENGR 56

Catalog Description:
Introduction to computer-aided drafting utilizing the AutoCAD software program. Course will teach the student how to use this industry standard software to execute professional quality drafting/design work. Particular attention will be given to the components of a CAD system, the software interface, drawing set-up, geometric construction & editing, orthographic projection, dimensioning, plotting, and an introduction to 3-dimensional drafting/design.

Prerequisites/Corequisites:
Course Completion or Current Enrollment in APTECH 45 (or APTECH 55 or IED 55)

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: Intro to computer-aided drafting utilizing the AutoCAD software program. Areas covered include: drawing set-up, geometric construction & editing, orthographic projection, dimensioning, plotting, and an introduction to 3-dimensional drafting/design. Course will teach students how to use this industry standard software to execute professional quality work. (Grade

Only)
Prerequisites/Corequisites: Course Completion or Current Enrollment in APTECH 45 (or
APTECH 55 or IED 55)
Recommended:
Limits on Enrollment:
Transfer Credit: CSU;UC.
Repeatability: Total 2 Times

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

		Effective:	Inactive:
AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:
CSU Transfer:	Transferable Effective: Fall 1988	Inactive:	
UC Transfer:	Transferable Effective: Fall 1999	Inactive:	

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
The students will:
1. Demonstrate proficiency utilizing the CAD workstation hardware while
   producing drafting/design work.
2. Demonstrate how to access appropriate AutoCAD commands by using:
   a. tool Bars
   b. pulldown menus
   c. keyboarding
   d. the mouse
   e. tool palette
3. Illustrate how to use the following AutoCAD commands and settings
   by establishing or creating:
   a. units and sheet size
   b. layers, linetypes and color
   c. precise geometric entities
   d. dimensioned drawings
   e. appropriate system variables
   f. stored drawing elements
   g. saved drawings
   h. plotted drawings

Topics and Scope:

I. Introduction to the computer as a drafting/design tool with emphasis
   on hardware and software.

A. Windows desktop navigation
B. Mouse usage
C. Keyboard entry
D. File management
II. Using the AutoCAD software interface.
   A. Accessing AutoCAD commands via toolbars, pulldown menus, keyboarding, and tool palette.
III. Setting up drawing environment
   A. Units
   B. Sheet size
   C. Object Properties
   D. Dimensioning variables
IV. Creating AutoCAD entities
   A. Lines, polylines, circles, rectangles, splines, polygons, arcs, blocks, and dimensions.
V. Editing Drawing Entities
   A. Scale, stretch, rotate, trim, extend, erase, copy, move, mirror, array, break, fillet, chamfer
VI. Plotting Drawings
   A. Model space environment
   B. Layout environment
   C. Plotter configuration

Assignment:

1. Reading and written assignments as assigned by instructor.
2. AUTOCAD exercises and drawings.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.	Writing 0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Quizzes, CAD Drawings	Problem solving 5 - 35%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances, Performance exams, CAD Drawings	Skill Demonstrations 35 - 60%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion, COMPUTER GENERATED DRAWINGS	Exams 10 - 35%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
1. AutoCad 2006: A Problem Solving Approach
    Sham Tickoo, AutoDesk Press 2005
2. Using AutoCad 2006
    Ralph Grabowski, AutoDesk Press 2005