APTECH 59 Course Outline as of Fall 2013

CATALOG INFORMATION

Dept and Nbr: APTECH 59   Title: ARCH CAD BASICS
Full Title: Architectural CAD Basics
Last Reviewed: 2/6/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	2.00	Lab Scheduled	0.50	8	Lab Scheduled	8.75
		Contact DHR	0		Contact DHR	0
		Contact Total	2.50		Contact Total	43.75
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00   Total Student Learning Hours: 113.75

Title 5 Category: AA Degree Applicable
Grading: Grade Only
Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:
Formerly:

Catalog Description:
Architectural project design development and generation of construction documents using the AutoCAD software program. Problem solving skills will be emphasized. The student will construct a complete set of working drawings.

Prerequisites/Corequisites:
Course Completion of APTECH 46

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: Architectural project design development and generation of construction documents using the AutoCAD software program. Problem solving skills will be emphasized. The student will construct a complete set of working drawings. (Grade Only)
Prerequisites/Corequisites: Course Completion of APTECH 46
Recommended:
Limits on Enrollment:

Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer: Transferable   Effective: Spring 2002   Inactive:

UC Transfer: Effective: Inactive:

CID:

Certificate/Major Applicable:
Not Certificate/Major Applicable

COURSE CONTENT

Outcomes and Objectives:
Upon completion of the course, the students will:
1. Research and apply local building codes relevant to the given project.
2. Select appropriate construction materials relevant to the given project.
3. Identify appropriate construction practices and procedures that govern project design for the given project.
4. Describe how the AutoCAD program is structured, including its adaptability to various architectural industry situations.
5. Produce a complete set of working drawings using the AutoCAD software program.
6. Repeat students will utilize new software releases while working on a project of increased complexity.

Topics and Scope:

I. Scope of project
   A. Existing site and/or construction documents
   B. Client's needs and wants
   C. Client's monetary budget
   D. Timeline for design development and completion of working drawings
II. Initial design
   A. Researching pertinent building codes and local regulations
   B. Developing rough diagrams of site and floor plans
III. Design refinement
   A. Architectural style
   B. Pertinent construction practices, procedures and materials
   C. Dimensionally accurate floor plan and site placement
   D. Exterior elevations
IV. CAD drawing conventions
   A. Template drawing environment and settings
   B. Printing overview

V. Construction drawing layout
   A. Dimensionally accurate site plan, floor plan, foundation, floor
     framing, roof framing, and sectional views
   B. Structural details
VI. Annotation
   A. Dimension
   B. Notation
VII. Plotting
VIII. Evaluation of drawings
IX.   Revisions
X. For Repeating Students:
   A. New software releases
   B. Increased complexity

Assignment:

1. Reading assignments 10-15 pages per week.
2. CAD working drawings, project set
3. Quizzes (2-3); final exam
4. Participation in classroom discussion and project work
5. Repeating students will:
  a. update their skills on new software releases
  b. work on a more complex project

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.

project set	Problem solving 10 - 50%

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

CAD working drawings	Skill Demonstrations 35 - 60%

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

quizzes, final exam	Exams 10 - 35%

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

participation	Other Category 5 - 10%

Representative Textbooks and Materials:
1. AutoCad 2010: A Problem Solving Approach, Sham Tickoo, AutoDesk Press 2009
2. Using AutoCad 2010, Ralph Grabowski, AutoDesk Press 2009