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.

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

project set

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

CAD working drawings

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

quizzes, final exam

Writing 0 - 0%

Problem solving 10 - 50%

Skill Demonstrations 35 - 60%

Exams 10 - 35%

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

participation	Other Category 5 - 10%		.y
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- 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