

APTECH 59 Course Outline as of Fall 2005**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	3.00	8	Lecture Scheduled	24.00
Minimum	2.00	Lab Scheduled	2.00	8	Lab Scheduled	16.00
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	40.00
		Non-contact DHR	2.00		Non-contact DHR	16.00

Total Out of Class Hours: 48.00

Total Student Learning Hours: 104.00

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 39 - Total 2 Times

Also Listed As:

Formerly:

Catalog Description:

Architectural project design development and generation of construction documents using the AutoCAD software program. The course will emphasize problem solving skills within the areas of project design and development while examining local building codes, construction practices and procedures, construction materials, and CAD techniques for generating design layout and finished technical drawings. The student will construct a complete set of working drawings.

Prerequisites/Corequisites:

APTECH 46 with a grade of "C" or better or equivalent.

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: APTECH 46 with a grade of "C" or better or equivalent.

Recommended:
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Total 2 Times

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. Identify and execute a proper program of design development for an architectural project.
2. Research and apply local building codes, relevant to the given project.
3. Select appropriate construction materials, relevant to the given project.
4. Identify appropriate construction practices and procedures that govern project design for the given project.
5. Describe how the AutoCAD program is structured, including its adaptability to various architectural industry situations.
6. Produce a complete set of working drawings using the AutoCAD software program.

Topics and Scope:

Design/development program (Scope of project)

- A. Existing site and/or construction documents for the given project presented to the student.
- B. Client's needs and wants stated for the given project.
- C. Client's monetary budget disclosed for the given project.
- D. Timeline for design development and completion of working drawings established.
2. Initial design
 - A. Pertinent building codes and local regulations researched and established.
 - B. Rough diagram of site and floor plans developed.
3. Design refinement

- A. Architectural "style" established.
 - B. Pertinent construction practices, procedures and materials. researched and established.
 - C. Dimensionally accurate floor plan, site placement generated.
 - D. Rough exterior elevations developed.
4. CAD drawing conventions
 - A. Template drawing environment and setting created.
 - B. Printing Overview
 5. Construction drawing layout
 - A. Dimensionally accurate site plan, floor plan, foundation, floor framing, roof framing, and sectional views created.
 - B. Important structural details identified and constructed.
 6. Drawing annotation
 - A. Dimension all drawings.
 - B. Identify significant notation necessary, and create at drawings.
 7. Plotting of drawings
 8. Evaluation of drawings.
 9. Drawing revisions

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, DATA BASE DRAWINGS

Problem solving
10 - 50%

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

Class performances, Performance exams, DATA BASE 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 2000: A Problem Solving Approach
Sham Tickoo, AutoDesk Press 1999
2. Using AutoCad 2000
Ralph Grabowski, AutoDesk Press 1999