APTECH 87 Course Outline as of Fall 1997

CATALOG INFORMATION

Dept and Nbr: APTECH 87   Title: CAD RENDER & MODEL
Full Title: 3D Modeling and Rendering Using CAD
Last Reviewed: 9/14/2020

Units			Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00		Lecture Scheduled	2.00	17	Lecture Scheduled	34.00
Minimum	2.00		Lab Scheduled	3.00	8	Lab Scheduled	51.00
			Contact DHR	0		Contact DHR	0
			Contact Total	5.00		Contact Total	85.00
			Non-contact DHR	3.00		Non-contact DHR	24.00

Total Out of Class Hours: 68.00   Total Student Learning Hours: 204.00

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:
A review of 3D Modeling skills covered in ApTech57, Advanced AutoCAD, and a comprehensive study of AutoCAD's Render Program. The student will construct, view, and render computer-generated 3D models. Rendering concepts, lighting sources and angles, reflectivity, surface designation and defining scenes will be covered. Model walkthrough and fly around slide shows will be created.

Prerequisites/Corequisites:
Course Completion of APTECH 57

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: A comprehensive study of AutoCAD's 3-Dimensional Modeling and Rendering capabilities. The student will construct, view, and render computer generated 3D Models. (Grade Only)
Prerequisites/Corequisites: Course Completion of APTECH 57

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

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 1994	Inactive:	Fall 2021
UC Transfer:		Effective:	Inactive:	

CID:

Certificate/Major Applicable:
Not Certificate/Major Applicable

COURSE CONTENT

Outcomes and Objectives:
The student will demonstrate proficiency in utilizing AutoCAD's Render
Program as it applies to 3D Surface and Solid Models through creation
of renderings. 3D Models and "SLIDE SHOWS" will also be created by the
student.

Topics and Scope:

1. Review of wire-frame, surface, and Solid 3D Modeling Construction
   and Viewing Skills.
2. Introduction to Rendering concepts:
   a. Ambient, Distant, and Point Lights
   b. Light Sources and Angles
   c. Light Sources and Reflectivity
   d. Point Light Sources, Distance and Fall-off
3. Rendering Existing 3D Models:
   a. Selecting a Rendering Type
   b. Creating, Saving, and Restoring Views
   c. Inserting, Modifying, Moving, and Adjusting Lights
   d. Defining and Modifying Scenes
   e. Establishing Finishes
4. Construction of Surface and Solid Models
5. Rendering of Student Surface and Solid Models
6. Creation of a "SLIDE SHOW" utilizing student generated models.

Assignment:

Existing 3D Models will be rendered, Surface and Solid Models

will be created and rendered, and slide shows will be created utilizing student generated models.

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, Exams	Problem solving 10 - 30%

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 40 - 60%

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

True/false, Completion, SHORT ESSAY REVIEW QUESTIONS	Exams 20 - 40%

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

None	Other Category 0 - 0%

Representative Textbooks and Materials:
AUTOCAD RENDER REFERENCE MANUAL, LATEST EDITION.