Number: ARCH G162  
TITLE: 3D CAD For Architecture

ORIGINATOR: Theodore Palmer  
EFF TERM: Spring 2008

FORMERLY KNOWN AS:

DATE OF OUTLINE/REVIEW:

CROSS LISTED COURSE:

TOP NO: 0201.00  
CID:

SEMESTER UNITS: 3.0

HRS LEC: 36.0  
HRS LAB: 36.0  
HRS OTHER: 0.0

CONTACT HRS TOTAL: 72.0

STUDY NON-CONTACT HRS RECOMMENDED: 72.0

CATALOG DESCRIPTION:

Using 3D Architectural Computer Aided Drafting (CAD) industry standard software, this course is an introduction to the design, digital modeling and rendering of architectural project solutions. Course experiences in lecture and lab will include the development and plotting of selected 3D architectural conceptual modeling from CAD files or project design documents.

JUSTIFICATION FOR COURSE:

PREREQUISITES:

COREQUISITES:

ADVISORIES:

• ARCH G160: Introduction To Computer-Assisted Drafting For Architecture (AUTO-CAD) or equivalent experience.

ASSIGNED DISCIPLINES:

Architecture
Drafting CADD (computer-aided drafting/design), CAD (computer-aided design), CAD (computer-aided drafting)

MATERIAL FEE: Yes [ ] No [X] Amount: $0.00

CREDIT STATUS: Noncredit [ ] Credit - Degree Applicable [X] Credit - Not Degree Applicable [ ]

GRADING POLICY: Pass/No Pass [ ] Standard Letter [X] Not Graded [ ] Satisfactory Progress [ ]

OPEN ENTRY/OPEN EXIT: Yes [ ] No [X]

TRANSFER STATUS: CSU Transferable[X] UC/CSU Transferable[ ] Not Transferable[ ]

BASIC SKILLS STATUS: Yes [ ] No [X]

LEVELS BELOW TRANSFER: Not Applicable

CALIFORNIA CLASSIFICATION CODES: Y - Not Applicable

NON CREDIT COURSE CATEGORY: Y - Not applicable, Credit Course

OCCUPATIONAL (SAM) CODE: C

REPEATABLE ACCORDING TO STATE GUIDELINES: No [X] Yes [ ] NUMBER REPEATS:

REQUIRED FOR DEGREE OR CERTIFICATE: No [X] Yes [ ]

GE AND TRANSFER REQUIREMENTS MET:

Degree Applicable
AA Degree Applicable

COURSE LEVEL STUDENT LEARNING OUTCOME(S) Supported by this course:
1. use concepts and skills developed in Architectural Technology 160 and apply them to AutoCAD Architectural Desktop software or other industry standard programs.

2. develop 3D architectural presentations and digital models of project design solutions using industry standard software.

3. apply advanced CAD application commands for more complex 3D simulations and digital presentation projects.

COURSE OBJECTIVES:

1. Use concepts and skills developed in Architectural Technology 160 and apply them to AutoCAD Architectural Desktop software or other industry standard programs.

2. Demonstrate skills required to develop 3D architectural presentations and digital models of project design solutions using industry standard software.

3. Apply advanced CAD application commands for more complex 3D simulations and digital presentation projects.

COURSE CONTENT:

LECTURE CONTENT:

A. Basic CAD Orientation
   1. Hardware components
   2. Software vocabulary
   3. Disk Format
   4. Work file management
   5. Industry usage and examples
   6. Software capabilities and industry applications

B. Entering Architectural Desktop
   1. Basic drawing setup
   2. Basic drawing entities
   3. Fundamental drawing commands
   4. Desktop menus

C. Architectural Desktop Operations
   1. 3D Architectural views
   2. Walk-throughs
   3. Rendering techniques
   4. Image import
   5. Light/shadow applications

D. Drawing Development
   1. Templates
   2. 3D - isometric views
   3. Line types, shading - surface materials

E. Drawing File Management
   1. Backups
   2. Copying to/from diskettes
   3. Drawing files and directories
   4. Drawing plotting/printing
   5. E-mail files

F. Other Related Architectural Desktop Routines and Procedures

LABORATORY CONTENT:
METHODS OF INSTRUCTION:
A. Lecture:
B. Lab:
C. Independent Study:

INSTRUCTIONAL TECHNIQUES:

COURSE ASSIGNMENTS:
Reading Assignments
1. Software manual and tutorial work manual readings will be assigned for most class meetings until all required material is mastered.

2. Students will be required to read all course handouts. Students will obtain proficiency in hardware/software vocabulary in order to communicate with the instructor and use the computer.

Out-of-class Assignments
Assigned reading.

Writing Assignments
1. Students will be able to properly use and apply Architectural Desktop and/or industry standard software in preparation of architectural drafting and design presentation projects.

2. Student exercises will focus on 3D CAD modeling solutions and digital graphics.

3. Students will demonstrate the skills necessary to print, plot, or reproduce project drawings.

METHODS OF STUDENT EVALUATION:
Final Exam
Short Quizzes
Written Assignments
Report
Projects (ind/group)
Problem Solving Exercises
Skills Demonstration

Demonstration of Critical Thinking:
Students will demonstrate ability to organize, develop, modify and produce industry quality 3D CAD architectural presentation drawings and digital models.

Required Writing, Problem Solving, Skills Demonstration:
1. Students will be able to properly use and apply Architectural Desktop and/or industry standard software in preparation of architectural drafting and design presentation projects.

2. Student exercises will focus on 3D CAD modeling solutions and digital graphics.

3. Students will demonstrate the skills necessary to print, plot, or reproduce project drawings.

TEXTS, READINGS, AND RESOURCES:

LIBRARY:
Adequate library resources include:

Comments:

Attachments:
Attached Files