ARCH 27 Course Outline as of Fall 2011

CATALOG INFORMATION

Dept and Nbr: ARCH 27 Title: ARCH DIGITAL TOOLS 2
Full Title: Architectural Digital Tools 2
Last Reviewed: 2/6/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00	Lecture Scheduled	1.50	17.5	Lecture Scheduled	26.25
Minimum	2.00	Lab Scheduled	1.50	8	Lab Scheduled	26.25
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 52.50 Total Student Learning Hours: 105.00

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	ARCH 60B

Catalog Description:
Introduction to the use of digital three-dimensional modeling tools, such as AutoCAD, Revit and SketchUp, applied to design presentations and visual communication.

Prerequisites/Corequisites:
Course Completion of ARCH 60 (or ARCH 60A)

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100; AND Concurrent enrollment in ARCH 61B and ARCH 62B

Limits on Enrollment:

Schedule of Classes Information:
Description: Introduction to the use of digital three-dimensional modeling tools, such as AutoCAD, Revit and SketchUp, applied to design presentations and visual communication. (Grade or P/NP)
Prerequisites/Corequisites: Course Completion of ARCH 60 (or ARCH 60A)
Recommended: Eligibility for ENGL 100 or ESL 100; AND Concurrent enrollment in ARCH 61B and ARCH 62B

Limits on Enrollment:
Transfer Credit: CSU;UC.
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 2010	Inactive:	
UC Transfer:	Transferable	Effective:	Spring 2010	Inactive:	Spring 2018

CID:

Certificate/Major Applicable:
Major Applicable Course

COURSE CONTENT

Outcomes and Objectives:
Upon completion of this course, students will be able to:

1. Effectively use three-dimensional modeling programs to support two- and three-dimensional design development and design presentations.
2. Effectively use digital tools to apply texture, color, light and shadows to models
3. Export models and views to other programs and import information from other sources to use in model construction.
4. Print or plot graphic representations of digital three-dimensional models in gray tones and color.
5. Use digital modeling skills in preparing architectural presentations.

Topics and Scope:

1. Role of the three-dimensional model in studying forms and presenting design concepts
2. Principles and concepts of digital three-dimensional modeling
3. Interpreting physical models to create digital models
4. Interpreting and scanning drawings to create digital models
5. Introduction to AutoCAD for use in modeling and presentations
   A. Basic tools and commands
   B. Creating two-dimesional forms
   C. Modeling three-diemnsional forms
   D. Identifying and applying textures and colors
   E. Modeling light and shadow
   F. Importing and exporting information
   G. Designing and preparing presentations with AutoCAD
   H. Printing and plotting
6. Introduction to Sketch-Up for use in modeling and presentations
   A. Basic tools and commands

B. Creating two-dimensional forms
C. Modeling three-dimensional forms
D. Identifying and applying textures and colors
E. Modeling light and shadow
F. Importing and exporting information
G. Designing and preparing presentations with Sketch-Up
H. Printing and plotting

7. Demonstration of Revit for use in modeling and presentations
   A. Overview of modeling tools
   B. Modeling a topography
   C. Demonstration of Revit as a presentation tool
8. Integrating digital modeling skills to produce architectural presentations

Assignment:

1. Read 20- 40 pages per week
2. 4-7 three-dimensional modeling problem solving and skills demonstration exercises
3. 4-7 three-dimensional modeling problem solving and skills demonstration projects
4. 1 final project incorporating all modeling tools
5. 2-4 quizzes
6. 1 final exam presenting final 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.

Three-dimensional modeling problem solving exercises and project/s	Problem solving 40 - 50%

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

Three-dimensional modeling skills demonstration exercises and project/s	Skill Demonstrations 30 - 40%

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

2-4 quizzes and 1 final project presentation	Exams 15 - 25%

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

Participation and attendance	Other Category 0 - 10%

Representative Textbooks and Materials:
Google SketchUp 7 for Dummies, by Aidan Chopra, Wiley publishers, 2009.
Instructor prepared materials