ARCH A160: 3-D MODELING: SKETCHUP 1

Item	Value
Curriculum Committee Approval Date	11/02/2022
Top Code	020100 - Architecture and Architectural Technology
Units	2 Total Units
Hours	54 Total Hours (Lecture Hours 27; Lab Hours 27)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)

Course Description

This course introduces Google SketchUp 3-D Modeling as used for architectural design visualization. Computers with SketchUp Pro will be used and instruction will focus on computer modeling a rectilinear design and exporting images and animation for design presentation. Students should have basic knowledge of computers and file management. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Students will be able to communicate their design using 3-Dimensional modeling images at an entry-level professional quality, as evaluated by the instructor.

Course Objectives

- 1. Set up a new file and build a model.
- 2. Manage layers, components and materials.
- 3. Produce a model that includes sufficient context and detail to communicate a design.
- 4. Manipulate the ground plane and interface with Google Earth to show design context.
- 5. Produce design presentation material including images and animation.

Lecture Content

Building a Simple Model Basic Operation Building a Model Organization, layers Model Views Components Scale 3-D Warehouse Placement, editing Materials/Surfaces Materials Colors Photographs Bitmaps Context Orientation and Lighting Terrain Sandbox Google Earth Presentations Layouts and printing Exporting 2-D images Exporting 3-D images and animations Controlling animations Interface with CAD Rendering w/ Kerkythea and other software

Lab Content

Lab content will include the practice of 3D modeling, drawing, and organization discussed during lecture, including individual and group feedback on performance. Topics will include: Building a Simple Model Components Materials/Surfaces Context Presentations

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)
- Lab (04)
- DE Live Online Lab (04S)
- DE Online Lab (04X)

Instructional Techniques

Lecture and assignments, quizzes, individual and small group activities and instruction.

Reading Assignments

Students will spend a minimum of one hour per week reading 3D software documentation as prescribed by instructor

Writing Assignments

Writing for this course only includes minor notations and short professional descriptors. Critical thinking is reinforced in the act of designing and presenting a persuasive set of images.

Out-of-class Assignments

Students will spend a minimum of 2 hours per week completing 3D modeling and drawing assignments

Demonstration of Critical Thinking

Instructor-graded assignments, quizzes and project submittals and reviews.

Required Writing, Problem Solving, Skills Demonstration

Writing for this course only includes minor notations and short professional descriptors. Critical thinking is reinforced in the act of designing and presenting a persuasive set of images.

Eligible Disciplines

Architecture: Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Other Resources

1. Instructor handouts and current software reference book as recommended by instructor.