



South Central College

# ARCH 1402 Architectural Visualization (Elective Option 1)

## Common Course Outline

### Course Information

**Description** Introduce advanced BIM software applications as they pertain to 3D visualization. Explore alternate software for enhanced architectural rendering and imaging. An emphasis on modeling for conceptual design, architectural marketing, and 3D animations. An inquiry into emerging industry visualization technology is included.

**Total Credits** 3

**Total Hours** 80

### Types of Instruction

Instruction Type	Credits/Hours
Lecture	1/16
Lab	2/64

### Pre/Corequisites

ARCH 1301 Studio 3

### Course Outcomes

#### 1. Explore alternate software for architecture

##### Learning Objectives

Introduction to SketchUp imaging technology  
Utilize SketchUp to create objects, modify objects, and define objects  
Utilize SketchUp to apply materials, special effects, and create 3D camera views

#### 2. Explore software for enhanced architectural rendering

##### Learning Objectives

Introduction to the Lumion application using existing BIM files  
Utilize Lumion to apply materials and color to object surfaces  
Apply modeling and rendering techniques to components  
Apply lighting, illumination, and scenery

#### 3. Explore emerging / future visualization technology for Architecture

##### Learning Objectives

Discussion of Virtual Reality for architecture  
Discussion of 3D printing for architecture

Research for emerging industry technologies

#### **4. Demonstrate the ability to model for conceptual design**

##### **Learning Objectives**

Apply construction knowledge to perform assumptions for conceptual accuracy  
Analyze BIM component input with conceptual information  
Determine BIM component input for accurate scale and proportion

#### **5. Demonstrate the ability to model and document for marketing**

##### **Learning Objectives**

Import images into architectural renderings  
Explore alternate presentation views and techniques  
Apply basic graphic arts design to drawings utilizing the modeling software

#### **6. Demonstrate mastery of plan coordination for construction documents**

##### **Learning Objectives**

Schedule and execute document creation and coordination  
Demonstrate an understanding of coordination between disciplines  
Categorize and organize construction document content  
Critique and correct construction documents

#### **7. Develop and apply critical thinking and problem-solving skills**

##### **Learning Objectives**

Recognize the questions requiring solution  
Apply appropriate strategies to achieve a result  
Incorporate information judiciously and purposefully

#### **8. Demonstrate workplace professionalism & ethics**

##### **Learning Objectives**

Make timely and sound decision  
Take appropriate action to a situation  
Ensure quality standards are met

#### **9. Incorporate time management skills**

##### **Learning Objectives**

Cultivate self-starting and resourcefulness  
Demonstrate organizational skills  
Learn to prioritize tasks to manage workload  
Develop alternative study practices to maintain focus

### **SCC Accessibility Statement**

Disability Services provides accommodations and other supports to students with permanent and temporary disabilities that affect their SCC experience. Disabilities may include mental health (anxiety, depression, PTSD), ADHD, learning disabilities, chronic health conditions (migraine, fibromyalgia), sensory disabilities, and temporary disabilities (broken arm, surgery). Common accommodations are extended test time, private room for testing, audiobooks, and sign language interpreter.

Contact us: Faribault A116 (507) 332-5847. North Mankato E112 (507) 389-7222. [ds@southcentral.edu](mailto:ds@southcentral.edu)  
[www.southcentral.edu/disability](http://www.southcentral.edu/disability)

### **Grading Scale**

Each project, quiz, activity, and assignment will have an assigned possible number of points. Points will be awarded based on correctness of work. The total of all points earned will be divided by the maximum possible to determine a percentage. Late assignments will be accepted anytime until the semesters end **Any work handed in late (regardless of duration) will incur a 10%**

deduct from the grade for that instance.

Grades will be based on the following percentage of points earned

A	92-100
A-	90-91.9
B+	87-89.9
B	83-86.9
B-	80-82.9
C+	77-79.9
C	73-76.9
C-	70-72.9

Note: Grades below 70% will not count towards degree completion, course must be repeated

D+	67-69.9
D	63-66.9
D-	60-62.9
F	Below 60

## Attendance Expectation

Class attendance / participation contributes significantly to academic success. Students who attend classes regularly tend to earn higher grades and have higher passing rates in courses. Excessive absences may jeopardize your grades or even your ability to continue in this course. **Class participation will be part of your grade! The following will apply in all ARCH program courses:**

- An absence is excused ONLY if the student contacts the instructor BEFORE class.
- If you are absent from class for any reason, you are responsible for all missed work and for contacting the instructor promptly.
- Unexcused absences for 3 consecutive class sessions will reduce your final grade by 10% after the first occurrence and automatic course failure after the second occurrence. Overall attendance falling below 50% will result in automatic course failure.
- Online attendance is available at the instructor's discretion. It is reserved for extenuating circumstances and is NOT a replacement for attendance.