

# ARCH A155: BIM 1 FOR ARCHITECTURE

Item	Value
Curriculum Committee Approval Date	12/04/2024
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
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S)

## Course Description

This course introduces Building Information Modeling (BIM) as used to produce a 3-dimensional architectural model with detailed construction information. PCs with Autodesk Revit will be used and instruction will focus on computer modeling a simple project and extracting construction documentation. Students should have basic knowledge of computer operation and file management. Transfer Credit: CSU.

## Course Level Student Learning Outcome(s)

1. Students will be able to model a simple architectural project using BIM software, and format and extract construction and visualization documentation at a level considered entry-level professional quality, as evaluated by the instructor.

## Course Objectives

- 1. Use Building Information Modeling as a drawing and visualization tool.
- 2. Use the fundamental features of BIM software.
- 3. Use parametric 3D design tools to design projects.
- 4. Create detailing and drafting views.
- 5. Create construction documentation.
- 6. Use the presentation tools for presenting models.

## Lecture Content

BIM Basics User interface Elements and Families Starting a project Designing a model using parametric elements Walls, doors, windows Working with component families Managing and creating views Building the 3-D Model Floors, Ceilings, Roofs Stairs, railings Materials and systems Construction Documents Title blocks Text, callouts Details, drafting views Schedules, legends, keynotes Design Model Presentations 3-D views Sun and Shadow settings Rendering Import/Export with other programs

## Lab Content

Lab content will include the practice of building information modeling and organization discussed during lecture, including individual and group feedback on performance. Topics will include: BIM Basics Designing a model using parametric elements Building the 3-D Model Construction Documents Design Model 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 in-class drawing assignments, quizzes, individual and small group activities and instruction.

## Reading Assignments

Students will spend a minimum of one hour weekly reading BIM 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 coordinating this project and set of drawings.

## Out-of-class Assignments

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

## Demonstration of Critical Thinking

Instructor-graded assignments, quizzes and final grading of model and drawing package.

## 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 coordinating this project and set of drawings.

## Eligible Disciplines

Architecture: Any bachelor's 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.