

BIM 101 – Introduction to Revit

Abbreviated Syllabus

COURSE DESCRIPTION:

This course is designed for architects, interior designers, engineers, and others involved in the construction industry looking for an overview of building information modeling (BIM) using Revit.

The course examines how Revit users design 3D models that simultaneously document the project in schedules and 2D architectural drawings.

Topics include beginning a project, modifying elements, and presenting the model.

By the conclusion of the course, students will gain valuable knowledge building a BIM project from scratch and presenting multiple views of the model on an architectural sheet.

LEARNING OBJECTIVES:

- (1) Explore the Building Information Modeling (BIM) interface.
- (2) Design a 3D building model to explain how information is inter-related throughout the BIM model.
- (3) Integrate building components into a 3D model and develop construction document sheets from that model.
- (4) Develop a project which includes stairs and "feature architectural designs" to strengthen BIM modeling skill sets.

COURSE FORMAT:

The courses are asynchronous meaning there are no set start times for class. Students complete the work at their convenience, but must complete one discussion forum and the midterm at the halfway point of the course. Students can practice and/or complete their course exercises at home.

Both online and onsite courses are taught in a combined lecture/lab/online environment. The majority of the time, the student will be working on the computer. A typical onsite class period involves the instructor's direct prompting the students on the computer through a series of steps until thorough comprehension of and execution of that command is demonstrated. The same exercises are accomplished online, where videos are used for the basis of course instruction.

The online videos guide all students through the project modeling and documentation process.

The length of time for the completion of the course is two weeks from the start day of the class. At the end of the two weeks, a final model submission will be required.

Student inquiries, questions, and requests for information are handled through our Student Information System. All inquiries will be handled within one business day.

TEXTBOOK / REQUIRED BIBLIOGRAPHY:

Please click [here](#) to see and/or purchase the textbook used in this course.

COURSE OUTLINE:

DISCUSSION FORUMS

Discussion forums for the course are located here. There are two, one for student to student interaction and one that is graded. The Graded Discussion Forum requires an initial post, **due at the end of Week 1**, and a response to another student's post due by the end of the course.

LESSON 1

Students become familiar with the Revit User Interface, modeling basic wall types, and exploring working with the various views.

LESSON 2

Students insert datum elements; grids and elevations, and insert doors, windows and furniture into their model.

LESSON 3

Students continue with modeling elements, adding the roof, stairs, and floors.

LESSON 4

Students begin to annotate their design and create a sheet file for submission.

CLASS GRADING:

Class grades will be determined by the total number of points achieved in the following categories:

Reading Assessments	10%
Discussion Forums	10%
Hands-on Assessments	20%
Midterm	20%
Final	40%

Final grades are determined using the following scale:

Letter Grade	Percent	Grade Points	Letter Grade	Percent	Grade Points
A+	98 - 100	4.00	C	73 - 76	2.00
A	94 - 97	3.67	C-	70 - 72	1.67
A-	90 - 93	3.50	D+	67 - 69	1.33
B+	87 - 89	3.33	D	63 - 66	1.00
B	83 - 86	3.00	D-	60 - 62	0.67
B-	80 - 82	2.67	F	0 - 59	0.00
C+	77 - 79	2.33			

The weighted values will be summed into total points achieved.

AUTODESK CERTIFICATION OBJECTIVES:

The curriculum covered in this course includes the following Autodesk Certification objectives:

DOCUMENTATION - Use dimension strings, Set the colors used in a color scheme legend

ELEMENTS AND FAMILIES - Change elements within a curtain wall (grids, panels, mullions), Create compound walls, Differentiate system and component families, Work with family Parameters, Create a new family type

MODELING - Create a stair with a landing, Create elements such as a floors, ceilings, or roofs, Model railings, Edit a model element's material (door, window, furniture), Change a generic floor/ceiling/roof to a specific type, Attach walls to a roof or ceiling

VIEWS - Define element properties in a schedule, Control visibility, Use levels, Create a duplicate view for a plan, section, elevation, drafting view, etc., Manage view position on sheets, Organize and sort items in a schedule