

COURSE OUTLINE

Architecture 250
Introduction to Autodesk Revit Architecture

I. Catalog Statement

Architecture 250 teaches the fundamentals of the latest version of Autodesk Revit Architecture design software. Projects of a residential and commercial nature are utilized. Techniques used in the creation of floor plans, section views, elevations, schedules, and other construction documents are covered.

Units – 3.0

Lecture Hours– 2.0

Total Laboratory Hours – 4.0

(Faculty Laboratory Hours – 4.0 + Student Laboratory Hours – 0.0 = 4.0 Total Laboratory Hours)

Prerequisite: Architecture 101 or equivalent.

Recommended Preparation: Basic knowledge of AutoCAD.

II. Course Entry Expectations

Skills Level Ranges: Reading 5; Writing 5; Listening/Speaking 5; Math 3.

Prior to enrolling in the course, the student should:

1. explain the concepts of two-dimensional (2d) and three-dimensional (3d) design by the completion of projects on paper media;
2. demonstrate drafting skills by the completion of architectural projects using traditional drafting methods;
3. explain the critique process of evaluating design projects;
4. explain the importance and purpose of a portfolio.

III. Course Exit Standards

Upon successful completion of the required coursework, the student will be able to:

1. complete a series of architectural drafting problems using the Revit software;
2. explain the relationship between floor plans, elevations, and section views within a parametric environment;
3. create three-dimensional models and construction documents for a residential design project;
4. create three-dimensional models and construction documents for a commercial design project;
5. create photo-realistic renderings of architectural projects.

IV. Course Outline

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| A. | Introduction | 6 hours |
| | 1. Course expectations | |
| | 2. Overview of tutorials and projects | |
| | 3. Introduction to the graphic user interface (GUI) of the Revit Architecture software | |
| | 4. Introduction to Parametric Modeling and Building Information Modeling (BIM) | |
| B. | Residential Floor and Ceiling Plans | 12 hours |
| | 1. Creating and placing walls | |
| | 2. Door types and placement | |
| | 3. Windows types and placement | |
| | 4. Fixture Placement | |
| | 5. Roof types and creation | |
| | 6. Light Fixtures and Ceiling Systems | |
| C. | Residential Sections and Elevations | 12 hours |
| | 1. Wall Sections | |
| | 2. Annotation of Details | |
| | 3. Exterior elevations | |
| | 4. Interior elevations | |
| D. | Residential Schedules and Photo-Realistic Rendering | 12 hours |
| | 1. Room and door tags | |
| | a. Purpose | |
| | b. Placement | |
| | 2. Room finish and door schedules | |
| | 3. Interior room renderings | |
| | 4. Exterior renderings | |

E.	Residential Construction Documents	9 hours
1.	Title block and border set-up	
2.	Setting up drawing sheets	
3.	Printing a set of drawings	
F.	Commercial Drafting and Design	36 hours
1.	Multilevel floor plan	
2.	Roof plan	
3.	Floor systems and reflected ceiling plans	
4.	Interior and exterior elevations	
5.	Sections	
6.	Construction Estimates and Schedules	
7.	Photo-Realistic Rendering	
8.	Construction Documentation	
G.	Presentation of Final Residential and Commercial projects	9 hours

V. Methods of Presentation

The following instructional methodologies may be used in the course:

- a. lecture;
- b. multimedia;
- c. guest speakers;
- d. individual and group projects;
- e. field trips.

VI. Assignments and Methods of Evaluation

1. Midterm examination.
2. Final individual project.
3. Portfolio critique.
4. Final presentation
5. Final examination.

VII. Textbooks

Stine, S., Residential Design Using Revit® Architecture 2009.
Mission, KS: Schroff Development Corporation, 2008
10th Grade Textbook Reading Level. ISBN: 978-1-58503-465-9.

Stine, S., Commercial Design Using Revit® Architecture 2009.
Mission, KS: Schroff Development Corporation, 2008
10th Grade Textbook Reading Level. ISBN: 978-1-58503-464-2.