ARCH 058 - Introduction to Revit Architecture

Department: Architecture & Engineering

Course Number and Title: ARCH 058 - Introduction to Revit Architecture

Length of course in weeks: 16
Units: 3
Total Class Hours/Week: 8
Lecture Hours/Week: 2
Lab Hours/Week: 4
Lab Hours by Arrangement/Week: 2

Grade Type: Grade or pass/no pass

Catalog Description: This course is an introduction to Autodesk: Revit Architecture - software specifically designed for use by architecture, landscape architecture, interior design, and civil engineering professionals. This course emphasizes the construction of 3D models.

Schedule Description: This course is an introduction to Autodesk: Revit Architecture - software specifically designed for use by architecture, landscape architecture, interior design, and civil engineering professionals. This course emphasizes the construction of 3D models.

Recommended Preparation:
MATH 902: Arithmetic Functions &
MATH 902P: Pre-Algebra

Course Outcomes: Student Learning Outcomes

Outcome: Evaluate software options and choose the most efficient to complete drawings.
Assessment: In-class and homework drawing assignment.

Objectives: Upon completion of this course the student should be able to:

1. Use a computer to create 3D building models including plans, elevation, sections, perspective, isometrics, and 3D renderings.
2. Use the computer to expedite the drafting process, and save the electronic files of all drawings.
3. Efficiently draw and analyze different arrangements for the same site.

Assessment: Students in this course will be graded, at minimum, in at least one of the following four categories:

1. Writing Assignments: other (specify), written description on assignments and projects.
2. Problem Solving Demonstrations: exams, homework problems
3. Skill Demonstrations: class performance(s), performance (exam)
4. Examinations: completion

Repeatability: 2 times.

Methods of Instruction: Lecture & Lab

Lecture Content:
Section I: INTRODUCTION AND METHODOLOGY.
Quick Start Tutorial/General Overview. 20.00 %
2. Revit Architecture User Interface.

Section II: CREATE THE BUILDING MODEL. 40.00 %
3. Creating a Building Layout.
4. Setting up Project Levels and Views.
5. Column Grids and Structural Layout.
8. Floors and Roofs.
9. Developing the Exterior Skin.
10. Working with Families.

Section III: CONSTRUCTION DOCUMENTS. 40.00 %
11. Detailing and Annotation.
12. Working with Schedules and Tags.
15. Conceptual Modeling.

Lab Content:
1. Assignment/s on Creating a Building Layout. 5.00 %
2. Assignment/s on Setting up Project Levels and Views. 5.00 %
3. Assignment/s on Column Grids and Structural Layout. 5.00 %
4. Assignment/s on Groups and Links. 5.00 %
5. Assignment/s on Vertical Circulation. 5.00 %
6. Assignment/s on Floors and Roofs. 5.00 %
7. Assignment/s on Developing the Exterior Skin. 5.00 %
8. Assignment/s on Working with Families. 5.00 %
9. Assignment/s on Detailing and Annotation. 10.00 %
10. Assignment/s on Working with Schedules and Tags. 10.00 %
11. Assignment/s on Ceiling Plans and Interior Elevations. 10.00 %
12. Assignment/s on Printing and Publishing. 10.00 %
13. Assignment/s on Conceptual Modeling. 10.00 %
14. Assignment/s on Rendering. 10.00 %
Arranged Lab Content:

1. During the arranged lab hours, instructor will help and troubleshoot students 100.00% on the following topics and assignments:
   Creating a Building Layout.
   Setting up Project Levels and Views.
   Column Grids and Structural Layout.
   Groups and Links.
   Vertical Circulation.
   Floors and Roofs.
   Developing the Exterior Skin.
   Working with Families.
   Detailing and Annotation.
   Working with Schedules and Tags.
   Ceiling Plans and Interior Elevations.
   Printing and Publishing.
   Conceptual Modeling.
   Rendering.

Critical Thinking: Analyze the differences between drafting on a computer and drafting by hand.

College Level Required Reading, Writing, and other Outside-of-Class Assignments:
Over a 16 week presentation of the course, three hours per week are required for each unit of credit. Two hours of independent work done out of class are required for each hour of lecture. Outside of the regular class time the students in this class will be doing the following outside of class:

1. Problem solving activity or exercise: 2.00 additional hours
2. Practice Skills: 2.00 additional hours

Textbooks: