

INTDS 297 Computer Aided Design IV

COURSE LEARNING OUTCOMES (CLOs)

1. Apply basic Building Information Modeling (BIM) construction techniques to complete design project work.
2. Demonstrate the fundamentals of the design process by integrating them into the completion of design project work using BIM technology.
3. Recognize how BIM technology is utilized within the design community, on projects of all sizes. Begin to differentiate when it is appropriate to incorporate the technology on a project.
4. Demonstrate good time management skills, accuracy in work, and attention to detail in design work through the successful integration of BIM into design project work.
5. Employ the use of BIM to create a project model, then integrate that with industry standard rendering software in order to communicate design intent through graphic communication.

Course Outline:

I. Advanced Design Development Skills in Revit

Building on basic Revit drafting skills of CAD III.

A. Objectives:

- a. Understand how to create specific views in the model
 - b. Understand how to add more intricate components to the Revit model
- B. Create Duplicate views
 - C. Elevations and Sections
 - D. Adding a Floor to the model
 - E. Components (i.e. furniture, plumbing fixtures, casework)
 - F. Vertical circulation
 - G. Creating a roof
 - H. Reflected ceiling plans

II. Construction Documentation in Revit

Preparing the model for Construction Documents

A. Objectives:

- a. Setting up sheets in Revit for printing
 - b. Understand how to dimension the model
 - c. Master adding text to the model views and associated sheets
 - d. Understand how Tags work and their association with schedules
 - e. Understand how to create a schedule and add to a sheet
 - f. Understand how to add legends to reflected ceiling plans
- B. Setting up sheets
 - C. Printing
 - D. Dimensioning
 - E. Text
 - F. Tags and Schedules
 - G. Details and Keynotes
 - H. Legends and Schedules

III. Incorporating the Revit model into Google SketchUp

Exporting a Revit model, and importing the model into SketchUp for rendering.

A. Objectives:

- a. Understand how to export the Revit model in a file format that is compatible with Google SketchUp
- b. Understand how to import the prepared Revit file into SketchUp
- c. Mastering advanced Google SketchUp skills

B. Rendering the Revit Model

- C. Export a rendered SketchUp view and import the view back into a Revit sheet.