CLASS OBJECTIVE

This Revit 201 class picks up where the Revit 101 class leaves off. We cover all the options and settings for each tool, plus cover additional tools not in the intro class. We also take a deep dive into creating Custom Revit families.

The goal of the 201 class is to provide attendees with a complete and thorough understanding of each tool. After the class, attendees will be aware of all the options for each tool and be able to make all the modeling customizations required for their project.

CLASS PRE-REQUISITE

We expect all students to be comfortable with computer PC basics using Microsoft windows. The class assumes attendee will have familiarity with assembling architectural construction documents. Attendance in Revit 101 or a minimum 6 months Revit experience.

SESSION 1 – WALLS, CURTAIN WALLS

- Using Zoom for the class
- Workshop 1 - Walls
  - Quick Wall Review
  - Setting Up Wall Types
    - Wall structure review
    - Wall wrapping
  - Modifying Vertical Structure
    - Splitting Layers and Assign Layers
    - Integrated Sweeps and Reveals
    - Unlocking Layer Top\Bottoms to enable extensions
  - Split Wall Face and Painting Materials
  - Wall Joins Tools
  - Foundation Walls and Footings
    - Brick shelf & other reveals – profiles
  - Sloped walls (2021)

- Workshop 2 - Curtain Walls
  - Review Default Curtain Wall Type & Options
  - Review Default Mullion and Panel Options
  - Create Custom Curtain Wall types
  - Custom Mullion Profiles
  - Custom Curtain Panels
  - Nested Curtain Walls

SESSION 2 – ROOFS & SITE

- Workshop 1 - Roofs
  - Review of Roof by Footprint
  - Pitching "flat" roofs
    - Shape Editing - Modify Sub Elements & Split lines
    - Sloped vs. variable thickness
  - Roof by Extrusion
  - Dormers & Dormer Openings
  - Joining Roofs
  - Edge Treatments – Soffits, Fascias, & Gutters

- Workshop 2 - Site Modeling Tools
  - Topography
    - Point file
    - Linked CAD
    - Topo file
  - Split surfaces
  - Phasing and Grading Site (cut and fill)
  - Retaining Walls
  - Curbing, road ways, parking

SESSION 3 – STAIRS, RAMPS, RAILINGS

- Workshop 1 – Stairs & Ramps
  - Review of Placing stairs
  - Placing Ramps
  - Customizing Stairs
    - Calculation Rules for Riser, Tread and Run Width
    - Customizing Run and Landing Components
    - Customizing Stringers\Supports – Custom Profiles
    - Customizing Graphics – Cut Mark and Object Styles

- Workshop 2 – Railings
  - Review of Placing Rails
  - Customizing Railings
    - Rail Structure, Top Rail and Handrails, Custom Rail Profiles, Rail Joins
    - Baluster and Post Placement
    - Customizing Posts
  - Railings and Stairs together.

SESSION 4 – CUSTOM FAMILIES

- Workshop 1 – Introduction
  - Overview of Custom Component Family creation
    - Classes of Families
      - System, Loadable, In-Place
      - Hosting Vs. Non-Hosted Vs. Face Based
    - Family Categories and Family Templates
    - Type vs. Instance Parameters
    - 2D vs 3D
    - Introduction the Family Editor
    - Importance of Reference Planes
    - Constraints
    - Project Parameters, Shared Parameters
    - Creating Geometry
      - Solid Forms
      - Void Forms
    - Model and Symbol Lines

- Workshop 2 – Building Your First Family
  - Annotation Tag Family
  - Profile Family
  - Titleblock Family
  - Furniture Family

SESSION 5 – CUSTOM FAMILIES

- Workshop 3 – Comprehensive Parameters
  - Parameters
    - Family vs Shared Parameters
    - Instance vs. Type Parameters
    - Text Parameters
    - Dimension Parameters
      - Importance of Reference Planes
    - Visibility Parameters
      - Level of Detail Control & View Orientation Control
    - Material Parameters
    - Formulas
  - Creating Types within families
  - Nested Families
    - Family Type Parameters
  - Arrays in Families
  - When to Use In Place Families

- Workshop 4 - Exercises
  - Custom Door or Window
  - Table and Chairs
  - Cleaning up Manufacturer Families
  - In place “cloud ceiling” or sloped auditorium floor.