

## Autodesk® Revit® Structure - Fundamentals

### Brief Synopsis of Class Contents:

This class covers the basics of Autodesk® Revit® Structure, from schematic design through construction documentation. Students will be introduced to the concepts of Building Information Modeling and the tools for parametric design and documentation.

### Learning Objectives:

- Become familiar with the concepts and benefits of Building Information Modeling
- Understand the fundamental concepts and features of Autodesk Revit Structure
- Use the parametric 3D design tools to start designing projects
- Use the model-based tools for project documentation and detailing
- Know how to use Revit Structure in a typical multi-discipline work-sharing workflow

### Courseware:

Ascent Official Courseware:  
Revit Structure Fundamentals

### Number of Days:

5 Half Day Sessions

### Continuing Education Hours:

18 hours

### Who Should Attend:

All new users of Revit Structure

### Prerequisites:

Basic Computer skills

### System and Software Requirements:

<http://www.asti.com/LiveLab-Learning-and-Training/LiveLab-System-Requirements>

### FAQs and Cancellation Policy:

<http://www.asti.com/LiveLab-Learning-and-Training/LiveLab-FAQS>

## Class Outline and Topics:

### Introduction

- Intro to BIM
- Project Delivery Methods & Industry Trends
- Element Behavior in a Parametric Modeler

### User Interface & Project Setup

- Help & Online Resources
- Templates and creating a new Project
- Application Menu / Ribbon / Quick Access Toolbar / Shortcuts
- Project Browser / Properties Palette
- Families / Types / Parameters (instance vs. type)
- View Types / Creating Views
- Visibility Graphics, View Controls, Selection Filters
- Plan Regions & Scope Boxes
- Non-Rectangular Crop Regions
- Split Elevations

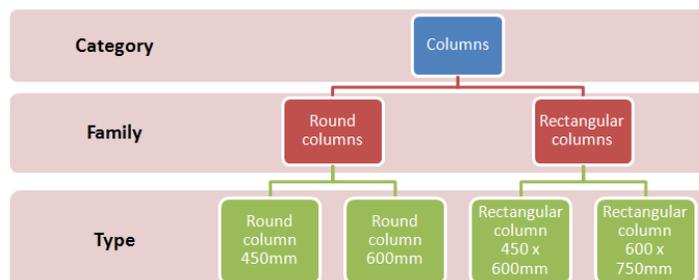
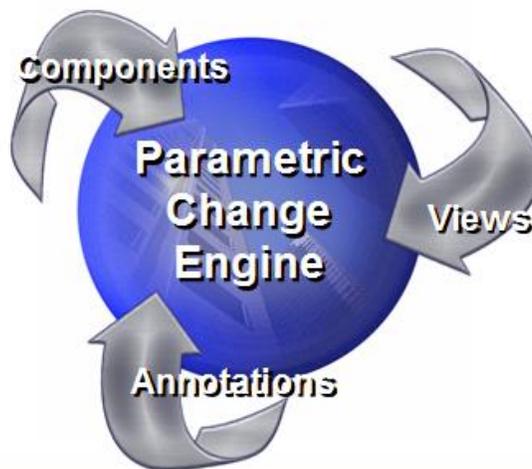
### General Modeling and View Navigation

- Setting up Levels and Grids
- Datum / Host Elements / Hosted Components / Annotations
- Floor Plans, Reflected Ceiling Plans, Exterior Elevations, Interior Elevations, Sections
- Locked Views / 3D Orthographic Views / Perspective Views
- Walls / Roofs / Trusses / Doors / Windows
- Edit Tools / Modify Tools / Geometric Tools
- Parametric Constraints (Level, Align, EQ, Dimensional Lock)

- Groups & Group Editor
- Creating Wall Sections, Callouts & Details
- Displaced Elements

### Structural Modeling

- Bearing Walls
- Columns
- Beams
- Bracing
- Floor Slabs / Slab Edge
- Foundations
- Beam Systems
- Trusses
- Sloped Columns
- Sloped Beams
- Cantilevered Beams





## Project Documentation & Interoperability

- Model Views, Schedules, Legends, Drafting Views
- Annotations, Dimensions, Symbols, Detail Components
- Tags, Keynotes
- Referencing Details, Referencing Other Views, Orienting to a View or Ref Plane
- Creating Sheets, Activating/Deactivating Views
- Printing, Importing & Exporting
- Import/Export Settings

## Structural Reinforcement

- Structural Reinforcement Overview
- Setting Cover Depth
- Adding Rebar
- Area Reinforcement
- Path Reinforcement
- Rebar Placement & Tagging
- Best Practice for Structural Reinforcement

## Vertical Circulation & Penetrations

- Stairs, Ramps, Elevators, Escalators
- Standard Run vs. Component Stairs
- Shaft Openings / Multi-Level vs. Single Story
- Railings / Railing Extensions
- Openings / Dormer Opening / Shaft Opening

## Structural Detailing

- Detail Views / Drafting Views / 3D Details
- Annotation / Detail Lines / Detail Components
- Rebar

