



Autodesk® Revit® Structure™ - Intermediate

Brief Synopsis of Class Contents:

This class covers the intermediate levels of Autodesk® Revit® Structure, from concrete design to preparing the model for analysis. Students will be introduced to more developed concepts of Building Information Modeling, and Revit Extensions tools for parametric design and documentation.

Learning Objectives:

- Become familiar with more developed concepts and benefits of Building Information Modeling
- Use the next level of parametric 3D design tools
- Use more automated tools for project design and documentation
- Learn how to use Revit Structure in a multi-discipline workflow

Courseware:

Ascent Official Courseware:
Revit Collaboration Tools

Number of Days:

3 Half Day Sessions

Continuing Education Hours:

12 hours

Who Should Attend:

Current users of Revit Structure, who are comfortable with fundamental skills, should attend this class

Prerequisites:

Revit fundamentals knowledge and experience

System and Software Requirements:

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

FAQs and Cancellation Policy:

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

Class Outline and Topics:

Concrete Reinforcement Design

- Rebar Placement (cover and workplane, 2D & 3D)
- Precast Parts and Assemblies

Preparing The BIM model for Structural Analysis

- Structural Settings, Member Supports, Consistency Checks
- Full adjust Gizmo tool for Analytical Models
- Loads, Load Tags, Load Cases, Load Combinations
- Transferring Loads and Structural Settings

Round Trip Analytical Updates

- Overview of Revit Structure Analysis Tools and Partners (Robot, RISA, RAM, ETABS, ADAPT, etc.)
- Analytical Surfaces
- Enable Analytical Model Parameter

Revit Structure Extensions

- Modeling Extensions
- Reinforcement Tools
- Analytical Tools
- CIS/2 Import/Export Tools
- Misc. Tools

Structural Enhancements

- Autodesk 360 Cloud-Based Structural Analysis for Revit
- Manual adjustment of the analytical model
- New instance properties of analytical elements

- Modified instance properties of analytical elements
- Adding new analytical model category Analytical Nodes in VG
- Adding Valid Physical Material Asset
- Filtering load combinations generated by add-ins
- Display Style for deformation of the analytical model
- Analytical Links
- Reinforcement Enhancements (snapping and alignment, Area and Path reinforcement can, Units added for a structural rebar, Fabric Reinforcement, Welded Wire Meshes)

Project Phasing

- Phase Properties: Phases, Phase Filters, Graphic Overrides
- Element States: Existing, New, Demolition, Temporary
- View Phase Properties / Element Phase Properties
- Phase mapping across Linked files
- Phase specific schedules

Design Options

- Option Sets & Options
- Primary & Secondary Options
- Visibility Graphics for Design Options
- Design Options visibility across Linked files
- Design Options specific schedules

Advanced Schedules and Tags

- Multi-Category Quantity Take-Offs
- Multi-Category Material Take-Offs

Groups and Links

- Model Groups / Attached Detail Groups
- Detail Groups
- Group Edit and Manipulation
- Save Group as Project / Insert Project as Group

Importing / Exporting

- Importing Vector files / Import Properties
- Import Raster Images
- Exporting Files / DWG Settings
- Round Trip Analytical Updates

Project Team Collaboration

- View Filters / View Templates
- Linking Files / Linked File View Properties
- Interference Checking

- Copy/Monitor and Coordination Review
- Reconcile Hosting
- Worksharing / Worksets
- Central and Local Project Files
- Multi-Discipline Coordination Best Practices

Site Design

- Model Origin and Shared Coordinates
- Topo Surfaces
- Site Components
- Retaining Walls, Foundations, Utilities, True North
- Site Grading (Phasing)
- Site Schedules (Parking, Cut & Fill)

