

AUTODESK NAVISWORKS COURSE SYLLABUS

Duration: 20 hrs

Module 1: Introduction to **Navisworks**

- Overview of Navisworks and its role in BIM coordination
- Understanding Navisworks file formats (NWD, NWF, NWC)
- Interface, workspace, and navigation tools
- Importing and opening 3D models from Revit, AutoCAD, etc.
- Understanding the difference between Navisworks Manage, Simulate, and Freedom

Module 2: Working with Models

- · Combining multiple discipline models(Architecture, Structure, MEP)
- · Managing large models efficiently
- Using Append, Merge, and Refresh commands
- · Managing model hierarchy and selection tree
- Model units and coordinate system alignment

Module 3: Navigation Tools

- Using navigation bar tools (walk, orbit, fly)
- Viewpoints, sections, and clipping planes

- Creating saved viewpoints
- · Setting up perspectives and camera paths
- · Managing view settings and navigation aids

Module 4: Review and Markup Tools

- Measuring distances, angles, and areas
- · Adding redlines, tags, and comments
- Using the Review tab and markup tools for team collaboration
- Comparing revisions of models
- · Creating section cuts and isolating components

Module 5: Selection and Search Sets

- · Understanding selection and search sets
- · Creating and managing search sets for model filtering
- Using selection inspector
- · Applying properties and metadata for selection
- Exporting and reusing search sets

Module 6: TimeLiner (4D Simulation)

- Introduction to 4D scheduling concepts
- Importing project schedules (MS Project, Primavera P6, Excel)
- · Linking model elements to schedule tasks
- Simulating construction sequences
- Creating and exporting 4D construction animations
- Analyzing project phasing and construction visualization

Module 7: Clash Detection (Coordination & amp; Analysis)

- Understanding clash detection and its importance
- Setting up clash tests between disciplines
- · Configuring clash rules and tolerances
- · Reviewing, grouping, and assigning clashes
- Generating clash reports
- Coordination workflow between Navisworks and Revit

Module 8: Quantification (5D BIM Basics)

Introduction to model-based quantity takeoff

- Setting up quantification workbook and catalogs
- Manual vs. automated takeoff
- Creating formulas and cost estimation
- Exporting takeoff reports

Module 9: Animation & Damp; Visualization

- · Creating animations and walkthroughs
- · Managing camera paths and keyframes
- · Applying materials, lighting, and realistic effects
- Rendering animations and still images
- Using section animations for presentations

◆ Module 10: Collaboration & Output

- Working with NWF and NWD files for coordination
- Exporting clash reports and viewpoints
- Integrating with BIM 360 / **Autodesk Docs**
- · Best practices for team-based coordination
- Sharing models and review outputs

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