



Advanced Certificate in BIM Analysis with Navisworks (6 Sessions in 18 Hours)

The course provides participants with the skills, knowledge and understanding to use Building Information Modelling (BIM) technology provided by Autodesk Navisworks. Upon course, participants will be able to conduct following analysis for building and infrastructural projects reviews:

- Clash Detection
- 4D Simulation
- 5D project budget / supplies simulation
- Realistic 3D animation

Course Outline

Getting Started

- Product Overview
- Workspace Overview
- Navigation
- Opening and Appending Files in Navisworks
- Saving, Merging, Refreshing, and Publishing Files
- Selection Tree and Selecting Objects
- The Autodesk Navisworks Engine
- Check and Set File Units
- Setting Selection Resolution and Sorting Structures
- Merging NWF Files
- Publish an NWD File

3D Model Review

- Hiding Objects and Overriding Materials
- Object Properties Measuring and Moving Objects
- Selection and Search Sets
- Viewpoints
- Comments and Redlining
- Animations
- Sectioning
- Links
- Comparing Models
- Switchback
- Navisworks Real-Time

Rendering

- Working with Animations in Navisworks
- Setting Lighting and Rendering Options

TimeLiner

- TimeLiner Overview
- Gantt View
- Creating Tasks
- Import Tasks from External Project File
- TimeLiner Simulation
- Simulation Control Bar
- Configuring and Defining a Simulation
- Simulation Export

Animator

- Animator Overview
- Creating a Basic Animation
- Manipulate Geometry Objects in an Animation Set
- Section Plane Sets

Scripter

- Scripter Overview
- Creating and Managing Scripts
- Creating and Configuring Events
- Creating and Configuring Actions

Quantification

- Quantification Overview
- Setting up a Quantification Project
- Item and Resource Management
- Model and Virtual Takeoff
- Managing Takeoff Data
- Analyzing Changes

Clash Detective

- Clash Detective Overview
- Setting Clash Rules
- Clash Results
- Clash Test Reporting
- Working with Clash Tests
- Audit Checks
- Export and Import Clash Tests
- Custom Clash Tests
- Laser Scan Data Clashing
- Holding and Releasing Objects
- SwitchBack in Clash Detective
- Time-Based Clashing

Autodesk Rendering

- Autodesk Rendering Overview
- Adding Materials to a Model
- Creating and Editing Materials
- Material Mapping
- Lighting
- Sun and Sky Lights
- Exposure Control
- Ground Planes
- Photorealistic Rendering
- Preparing and Rendering a Model

Presenter Basics

- Presenter Overview
- The Presenter Window and Tabbed Panes
- Presenter Tabs
- Apply Materials to Model Items
- Adding Lighting Effects to a Scene
- Adding Background Effects
- Outputting Rendered Images
- Outputting Animations (Videos)

Presenter Advanced Features

- Editing and Managing Materials
- Advanced Material Editing
- Individual Light Effects
- Light Scattering
- Image-Based Lighting

- Environment Backgrounds and Reflections
- Creating Custom Rendering Effects
- Custom Environments
- Editing a File for Image-based Lighting
- Editing a File for a Background Environment
- Importing Image Files into Presenter
- RPC (Rich Photorealistic Content)

Data Tools

- Database Support (Data Tools)
- About Database Support