
Autodesk NavisWorks

3 Days
24 AIA/CES



Course Description

Designed to teach the fundamentals of working with Navisworks, this hands-on course is intended to teach students about the necessary tools, concepts, and workflows used when working with Autodesk Navisworks.

The doors open at 8:45 a.m. Class begins at 9:00 a.m. and ends at 5:00 p.m. with two fifteen minutes breaks and a one hour lunch. We have bagels and coffee served in the morning upon arrival. A book and a certificate of completion are included in this fee.

Objectives

The primary objective of this courseware is to teach students how to combine 3D geometry from cross disciplines into one scene to enable effective model reviews. Students also learn to use the Clash Detective, TimeLiner, Animator, Scriptor, and Presenter tools competently within NavisWorks

After completing this course, students will be able to:

- Describe the main features and functionality of the NavisWorks products.
- Open and append 3D files of different formats and save them in a NavisWorks format.
- Create links to external scheduling files and object properties in external database files.
- Perform visual project model reviews using the built-in review and reporting tools.
- Create construction simulations of a project model to check the validity of construction schedules.
- Use Animator and Scriptor to create interactive animations for presentations and demonstrations.
- Add true-to-life materials, lighting, and backgrounds to project models to create photorealistic output.
- Perform interference detection tests between 3D files of different disciplines to check the integrity of the design.

Who Should Attend

This courseware is designed for new and experienced NavisWorks users who need to become familiar with all the main tools within NavisWorks .

Prerequisites

Before using this courseware, students should have working knowledge of 3D design and task-scheduling software.

Course Outline

Getting Started with NavisWorks

- Workspace Overview
- Opening and Appending Files in NavisWorks
- Saving, Merging, and Refreshing Files in NavisWorks
- Database Support (Data Tools)

Review

- Navigation and the NavisWorks Engine
- Selection Tree and Selecting Objects
- Hiding Objects and Overriding Materials
- Object Properties
- Measuring and Moving Objects
- Selection and Search Sets
- Viewpoints and Adding Comments and Redlining
- Animations, Sectioning, and Hyperlinks
- Comparing Models and SwitchBack
- NavisWorks Real-Time Rendering

TimeLiner

- TimeLiner Overview
- Creating Tasks and Importing Tasks from an External Project File
- TimeLiner Simulation
- Configuring and Defining a Simulation
- Simulation Export
- Time-based Clashing and the Clash Detective Report

Animator

- Animator Overview and Creating a Basic Animation
- Cameras and Camera Viewpoints
- Manipulate Geometry Objects in an Animation Set
- Section Plane Sets
- Controlling Animation Scene Playback

Scripter

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

Presenter Basics

- Presenter Overview
- Applying Materials to Model Items
- Adding Lighting Effects to a Scene
- Adding Background Effects
- Rendering Effects
- Outputting Rendered Images and Animations

Advanced Presenter Features

- Editing and Managing Materials
- Advanced Material Editing
- Ground Planes
- Individual Light Effects and Image-based Lighting
- Environment Backgrounds and Reflections
- Custom Environments
- Light Scattering
- Rich Photorealistic Content (RPC)

Clash Detective

- Clash Detective Overview
- Selecting Items to Be Clashed
- Clash-Test Settings and Rules
- Clash Results and Reporting
- Create and Save Batches of Clash Tests
- Export and Import Clash Tests
- Custom Clash Tests
- Laser-Scan Data Clashing
- Holding and Releasing Objects
- SwitchBack in the Clash Detective and Time-based Clashing

Note: The suggested course duration is a guideline. Course topics and duration may be modified by the instructor based upon the knowledge and skill level of the course participants.