

# Navisworks Essentials



## Overview

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**Course Length:** 24 - 48 hours (*can be taken via flexible schedule in-center or remotely*)

**Description:** This course will teach how to combine 3D geometry from cross disciplines into one scene to enable effective model reviews. Topics covered in this course are: The Navisworks user interface and Workspace, 3D Model Review, Animator, and Presenter Basics. Users will learn how to open, combine and review 3D models. They will create animations and learn the basic of the Presenter tools to help them to create photorealistic images and animations.

## Course Objectives/Topics

- Getting Started
- 3D Model Review
- Animator
- Presenter Basics
- **Please see below & page 2 for detailed topic list**

## Prerequisites

Users should have working knowledge of 3D design and task-scheduling software.

## Audience

This course is intended for users who want to learn the essential tools and techniques of using Autodesk Navisworks.

## Course Outline

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### Getting Started

- Product Overview
- Workspace Overview
- Workspace
- Working with The Workspace Procedure
- Working with the Workspace and Default Global Options Project
- Opening and Appending Files in Navisworks
- Opening and Appending Files
- Opening and Appending Files Procedure
- Open the Project Browser Procedure
- To Set File Units Procedure
- Opening, Appending, and Importing - Construction/Buildings Project
- Opening, Appending, and Importing - Plant Project
- Checking and Setting File Units - Project
- Saving, Merging, and Refreshing Files
- About File Types
- File Type Procedure
- Merging NWF Files - Construction/Buildings Project
- Merging NWF Files - Plant Project
- Publish an NWD File Project

### 3D Model Review

- 3D Model Review
- Navigation
- Using Navigation Tools
- Using the Navigation Tools - Construction/Buildings Project
- Using the Navigation Tools - Plant Project
- Absolute Coordinate Display
- Set Coordinate Display Procedure
- The Navisworks Engine
- How the NavisWorks Engine Works
- Performance Indicators
- Change and Observe Display Settings Project
- Making Items Required Project
- Selection Tree and Selecting Objects
- View the Selection Tree
- Selection Tree Procedure
- Setting Selection Resolution and Sorting Structures - Construction/Buildings Project
- Setting Selection Resolution and Sorting Structures - Plant Project
- Hiding Objects and Overriding Materials
- Hiding Objects
- Hiding Objects and Overriding Materials Procedure
- Hiding Items Project
- Change Object Color and Transparency Project
- Object Properties
- About Object Properties
- Open, View, and Customize Object Properties Procedure
- Add a New Custom Property Tab and Property Project
- Enable and Customize Quick Properties Procedure
- Enable and Customize Quick Properties - Construction/Buildings Project
- Enable and Customize Quick Properties - Plant Project
- Measuring and Moving Objects
- Measuring Object
- Measuring Objects Procedure
- Using the Measuring Tools Project
- Moving Items Procedure
- Moving an Item Project
- Selection and Search Sets
- Selection Sets
- To Create and Organize Selection Sets Procedure
- To Conduct and Save a Search Procedure
- To Create an Advanced Search Procedure
- To Export and Import Search Sets Procedure
- Create a Selection Set Project
- Conducting a Property Object Search Project
- Viewpoints
- About Viewpoints
- Display and Add a Viewpoint Procedure
- Organizing Viewpoints
- Editing Viewpoints
- Top Open the Viewpoint Editor Procedure
- To Edit Materials Procedure
- Exporting Views
- Exporting, Importing, and Printing Viewpoints Procedure
- Add and Organize Viewpoints - Construction/Buildings Project
- Add and Organize Viewpoints - Plant Project
- Comments and Redlining
- About Comments and Redlining
- Comments and Redline Procedure
- Add and Organize Viewpoints - Construction/Buildings Project
- Adding Comments, Redline Markups and a RedlineTag Project
- Viewpoint Animations
- Creating Viewpoint Animations
- Viewpoint Animation Procedure
- Edit and Export Animations Procedure
- Working With Viewport Animations - Construction/Buildings Project
- Working With Viewport Animations - Plant Project
- Sectioning
- Sectioning a Model
- Sectioning a Model Procedure
- Linking Two Section Planes Project
- Links
- Using Hyperlinks
- Using Hyperlinks Procedure
- View and Add Links Project
- Comparing Models
- About the Compare Tool Procedure
- To Compare Two Model Files Procedure
- Compare Two Model Files Project
- Switchback
- The SwitchBack Feature
- The SwitchBack Feature Procedure
- Navisworks Real-Time Rendering
- Real-Time Rendering
- Setting Lighting and Rendering Options Project

## Animator

- Animator
- Animator Overview
- The Animator Window and Tools
- Creating a Basic Animation
- Creating an Animation Procedure
- Create an Animation Project
- Cameras and Camera Viewpoints
- About Cameras and Viewpoints
- About Cameras and Viewpoints Procedure
- Adding a Camera and Camera Viewpoints Project
- Manipulate Geometry Objects in an Animation Set
- Geometry Manipulation Controls
- To Perform Object Manipulation by Linear and Rotate Procedure
- To Perform Object Manipulation by Scaling Procedure
- To Perform Object Manipulation by Changing Color Procedure
- To Perform Object Manipulation by Changing Transparency Procedure
- Manipulating Geometry Objects in an Animation Set Project
- Section Plane Sets
- About Section Plane Sets
- Animate Section Plane Sets Procedure
- Adding a Section Plane Set and Captured Sectioned Views Project
- Controlling Animation Scene Playback
- Animator PlayBack and Adjustments Procedure
- Adjust the Way an Animation Scene Plays Project

## Presenter Basics

- Presenter Basics
- Presenter Overview
- The Presenter Window and Tabbed Panes
- Apply Materials to Model Items
- The Materials Pane Procedure
- The Materials Pane
- Apply Materials to Model Items Project
- Adding Lighting Effects to a Scene
- About Lighting Effects
- Apply a Lighting Effect to a Model Procedure
- Apply a Lighting Effect to a Model Project
- Adding Background Effects
- About Background Effects
- Apply a Background Effect to a Model Procedure
- Apply a Background Effect to a Model Project
- Rendering Effects
- About Rendering
- Add a Rendering Style Procedure
- Select and Apply a Render Style Project
- Ground Planes
- About Ground Planes
- Add a Ground Plane Procedure
- Ground Planes Project
- Outputting Rendered Images
- Exporting a Rendered Image Procedure
- Exporting a Rendered Image Project
- Outputting Animation Videos
- Exporting an Animation Procedure
- Exporting an Animation Project