

Technical Education Services

Autodesk Civil 3D Fundamentals

Course Length: 4 days

The Autodesk Civil 3D Fundamentals training course is designed for Civil Engineers and Surveyors who want to take advantage of the Autodesk® Civil 3D® software's interactive, dynamic design functionality. The Autodesk Civil 3D software permits the rapid development of alternatives through its model-based design tools. You will learn techniques enabling you to organize project data, work with points, create and analyze surfaces, model road corridors, create parcel layouts, perform grading and volume calculation tasks, and lay out pipe networks.

Topics Covered

- Learn the Autodesk Civil 3D 2021 user interface.
- Create and edit parcels and print parcel reports.
- Create points and point groups and work with survey figures.
- Create, edit, view, and analyze surfaces.
- Create and edit alignments.
- Create data shortcuts.
- Create a Civil 3D template drawing.
- Create sites, profiles, and cross-sections.
- Create assemblies, corridors, and intersections.
- Create grading solutions.
- Create gravity fed and pressure pipe networks.
- Perform quantity takeoff and volume calculations.
- Use plan production tools to create plan and profile sheets.

Prerequisites

Experience with AutoCAD® or AutoCAD-based products and a sound understanding and knowledge of civil engineering terminology.

Course description shown for Autodesk Civil 3D 2021. Topics, curriculum, and/or prerequisites may change depending on software version.



Training Guide Contents

Chapter 1: The Autodesk Civil 3D Interface

- 1.1 Product Overview
- 1.2 Autodesk Civil 3D Workspaces
- 1.3 Autodesk Civil 3D User Interface
- 1.4 Autodesk Civil 3D Toolspace
- 1.5 Autodesk Civil 3D Panorama
- 1.6 Autodesk Civil 3D Templates and Settings

Chapter 2: Survey

- 2.1 Survey Workflow Overview
- 2.2 Survey Figures
- 2.3 Styles
- 2.4 Points Overview
- 2.5 Point Settings
- 2.6 Creating Points
- 2.7 Description Key Sets
- 2.8 Importing Survey Data
- 2.9 Point Groups
- 2.10 Reviewing and Editing Points
- 2.11 Point Reports

Chapter 3: Surfaces

- 3.1 Surface Process
- 3.2 Surface Properties
- 3.3 Contour Data
- 3.4 Other Surface Data
- 3.5 Breaklines and Boundaries
- 3.6 Surface Editing
- 3.7 Surface Analysis Tools
- 3.8 Surface Labels
- 3.9 Surface Volume Calculations
- 3.10 Surface Analysis Display

Chapter 4: Project Management

- 4.1 Design Development
- 4.2 Templates
- 4.3 Managing Styles
- 4.4 Styles in Depth
- 4.5 Online Maps Service
- 4.6 Autodesk Civil 3D Projects
- 4.7 Sharing Data
- 4.8 Using Data Shortcuts for Project Management

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Chapter 5: Parcels

- 5.1 Lines and Curves
- 5.2 Introduction to Parcels
- 5.3 Creating and Editing Parcels by Layout Overview
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- 6.2 Autodesk Civil 3D Sites
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Chapter 7: Profiles

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- 7.2 Create a Profile View Style
- 7.3 Create Profiles from Surface
- 7.4 Create Profile View Wizard
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- 8.1 Assembly Overview
- 8.2 Modifying Assemblies
- 8.3 Creating a Corridor
- 8.4 Corridor Properties
- 8.5 Designing Intersections
- 8.6 Corridor Section Review and Edit
- 8.7 Corridor Surfaces
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- 8.9 Section Volume Calculations

Chapter 9: Grading

- 9.1 Grading Overview
- 9.2 Feature Lines
- 9.3 Grading Tools
- 9.4 Modifying Autodesk Civil 3D Grading

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Chapter 10: Pipe Networks

- 10.1 Pipes Overview
- 10.2 Pipes Configuration
- 10.3 Creating Networks from Objects
- 10.4 The Network Layout Toolbar
- 10.5 Network Editing
- 10.6 Annotating Pipe Networks
- 10.7 Pressure Pipe Networks

Chapter 11: Plan Production

- 11.1 Final Design
- 11.2 Plan Production Tools
- 11.3 Plan Production Objects
- 11.4 Plan Production Object Edits
- 11.5 Creating Sheets
- 11.6 Section Views
- 11.7 Sheet Sets

Chapter 12: Quantity Takeoff and Visualization

- 12.1 Civil 3D Multi-view Blocks
- 12.2 Pay Items
- 12.3 Visualization
- 12.4 3D Navigation Tools
- 12.5 Managing Views in 3D
- 12.6 Corridor Visualization

Appendix A: Additional Information

- A.1 Opening a Survey Database
- A.2 Point Cloud Surface Extraction
- A.3 3D Solid Surface from TIN Surface
- A.4 Design Data

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To request more information or to see training locations, visit www.imaginit.com/contact-us.

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