

Autodesk **Civil 3D**: Beyond the Basics for General Civil Design

Target Audience

This course is ideal for civil engineers, designers, drafters, and survey professionals who already understand basic Civil 3D operations and want to develop skill in real-project workflows such as corridors, surfaces, parcels, pipe networks, and sheet production..

Course Objective

To build proficiency in advanced Civil 3D design tools used for site development, roadway modeling, pipe networks, surface analysis, and plan production workflows while improving accuracy, collaboration, and productivity.

Course Outcome

After completing this course, learners will be able to manage multi-discipline projects, create and edit corridors and pipe networks, perform surface and quantity analysis, automate sheet creation, and apply Civil 3D best practices in real project environments.

Course Outline: The course comprises **32-hours** of theory and demonstrations and is divided into **8** different chapters. Each chapter is designed with practical examples and guided exercises to reinforce learning and ensure a strong understanding of 3D cable and harness design concepts.



Chapter 1: Autodesk Civil 3D Styles and Settings

- Understanding Object & Label Styles
- Editing Style Display and Annotation Settings
- Managing Style Libraries
- Working with Drawing Settings (Units, Coordinate Systems, Scale)
- Importing & Transferring Styles Between Drawings
- **Practice Exercises**

Chapter 2: Project Management

- Understanding Data Shortcuts
- Working with Project Folders and Templates
- Creating and Managing References
- Best Practices for Multi-User Project Workflows
- **Practice Exercises**

Chapter 3: Parcels

- Parcel Creation Tools (Automatic & Manual)
- Editing Parcel Segments and Boundaries
- Parcel Area Analysis & Reporting
- Labeling and Display Styles for Parcels
- **Practice Exercises**

Chapter 4: Surfaces – Beyond the Basics

- Surface Editing Tools (Add Line, Swap Edge, Smooth)
- Managing Breaklines, Boundaries, and Contours
- Surface Volume Calculations
- Style Control for Surface Display & Analysis
- **Practice Exercises**



Chapter 5: Corridors – Beyond the Basics

- Creating and Modifying Corridors
- Working with Multiple Baselines
- Corridor Region & Targeting Controls
- Feature Line Extraction & Corridor Edits
- Corridor Surface Creation
- **Practice Exercises**

Chapter 6: Pipes – Beyond the Basics

- Creating and Editing Pressure & Gravity Pipe Networks
- Adjusting Pipe Slopes and Invert Elevations
- Labeling and Display Styles for Networks
- Profile Views and Vertical Alignments
- Exporting Pipe Data / Reports
- **Practice Exercises**

Chapter 7: Sheet Set Manager

- Understanding Sheet Set Structure
- Creating, Managing, and Publishing Sheet Sets
- Using Fields & Attributes to Automate Sheet Data
- Batch Plotting Drawings
- **Practice Exercises**

Chapter 8: Quantity Takeoff and Visualization

- Material & Volume Calculations
- Cut/Fill Analysis and Reporting
- Applying Visual Styles & Model Views
- Exporting Visualization Views
- **Practice Exercises**

