

# AutoCAD Civil and Civil 3D 2010 Essentials

## Description

This course covers the essentials of AutoCAD Civil 3D. Students learn how to work with point data in AutoCAD Civil 3D; create and analyze a surface; develop a site; model corridors, and pipe networks; work with survey data; and import and export data.

**Course Duration:** 3 days

## Syllabus

### Day 1

#### AutoCAD Civil 3D Environment

- ✓ Working with workspaces
- ✓ Examining Toolspace
- ✓ Creating Objects, Object Styles, and Label Styles
- ✓ Creating Drawing Templates
- ✓ Creating Reports

#### Survey

- ✓ Creating Survey Databases
- ✓ Creating Survey
- ✓ Creating Figure Styles and
- ✓ Importing Field Book Files
- ✓ Working with Survey

#### Points

- ✓ Import and Create Points
- ✓ Manage Points
- ✓ Use Grips to Control Graphical Point Display
- ✓ Create a Point Table

#### Surfaces

- ✓ Create a Surface
- ✓ Modify the Surface Properties
- ✓ Edit a Surface
- ✓ Assign a Contour Style and Apply Surface Labels

## Day 2

### Parcel Creation

- ✓ Create a Right-of-Way
- ✓ Create Parcels Using Layout Tools
- ✓ Create Parcels from Objects
- ✓ Edit and Renumber Parcels
- ✓ Label Parcels and Create Table

### Horizontal Alignments

- ✓ Create an Alignment with Polylines and Land XML
- ✓ Edit Alignments
- ✓ Label Alignments and Create Tables

### Existing and Design Profiles

- ✓ Create a Profile Using an Existing Terrain Surface
- ✓ Create a Design Profile Using Layout Tools
- ✓ Edit Profile Geometry
- ✓ Use Labels and Label Styles for Profiles and Profile Views

### Assemblies and Corridors

- ✓ Create Tool Palette with Subassemblies
- ✓ Create Assemblies for Cedar Cove Corridor
- ✓ Create a Corridor Model
- ✓ Create a Corridor Surface
- ✓ Extract Grading Feature Lines from Corridor

### Cross Sections and Quantities

- ✓ Create Cross-Section Sample Lines
- ✓ Create Cross-Section Views
- ✓ Calculate Earthworks and Pavement Structure Quantities
- ✓ Create Quantity Reports
- ✓ Modify the Sample Line Group Properties
- ✓ Create Construction Staking Data

## Day 3

### Grading and Quantities

- ✓ Create and Edit Feature Lines
- ✓ Create Interim Grading Surface
- ✓ Create Feature Lines from the Surface and Update Surface
- ✓ Create Final Grading Surface and Calculate Volumes
- ✓ Create Spot Elevation and Grade Labels

## Pipes

- ✓ Work with Pipe and Structure Rules
- ✓ Layout Pipe Network
- ✓ Draw Pipes in Profile View and Edit Pipe Network
- ✓ Label Pipes in Plan and Profile

## Plan Production

- ✓ Create View Frames in a View Frame Group
- ✓ Create All Sheets in Individual Drawings
- ✓ Use AutoCAD Sheet Set Manager

## Data Management

- ✓ Importing AutoCAD Land Desktop Data
- ✓ Exporting Civil 3D Data
- ✓ AutoCAD External References
- ✓ Civil 3D Data Shortcuts and Reference Objects

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**Note:** Course topics and duration may be modified by the instructor based upon the knowledge and skill level of the course participants.