# Civil 3D
## ESSENTIALS

**Course Length:** 16 Hours

**Overview:**

This course is designed for Civil Engineers and Surveyors who are new to the Autodesk Civil 3D environment.

**Learning Objectives:**

- Take advantage of Autodesk Civil 3D software's interactive, dynamic design functionality.
- Learn techniques enabling you to organize project data, work with points, create and analyze surfaces, model corridors, create parcel layouts, perform grading and volume calculation tasks.

**Prerequisites:**

It is recommended that the student has a working knowledge in basic the AutoCAD commands, Civil Engineering and/or Surveying, and are familiar with the latest versions of Microsoft Windows operating systems.

**Acquisition:**

Trainees will get a training manual and an industry recognized Certificate of Completion.

**Notes:**

The course length is a guideline. Course topics and duration may be modified by the instructor based upon the knowledge and skill level of the students.

**Course Description:**

This course introduces users to Autodesk Civil 3D, incorporating the tools necessary to create civil engineering drafting and GIS documentation. The training also enables students to complete transportation, site, and subdivision projects quickly while dynamically linking and generating automatic design updates.

**Topics Covered:**

**The Autodesk Civil 3D Interface**
- Product Overview
- Autodesk Civil 3D Workspaces
- Autodesk Civil 3D User Interface
- Autodesk Civil 3D Toolspace

**Survey**
- Points Overview
- Point Settings
- Creating Points
- Description Key Sets
- Importing
- Point Groups
- Reviewing and Editing Points
- Point Reports

**Surfaces**
- Surface Process
- Surface Properties
- Surface Editing
- Surface Analysis Tools
- Surface Labels
- Surface Volume Calculations
- Surface Analysis Display

**Alignments**
- Roadway Design Overview
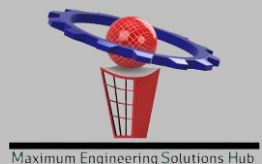- Introduction to Alignments
- Alignments Layout Tools
- Labels and Tables

**Profiles**
- Profiles Overview
- Create Profiles from Surface
- Finished Ground Profiles
- Create and Edit Profiles

**Corridors**
- Assembly Overview
- Modifying Assemblies
- Creating a Corridor
- Corridor Properties
- Corridor Surfaces

**Quantity Take Off/Sections**
- Sample Line Groups
- Section Volume Calculations
- Section Views

**Grading Objects**
- Grading criteria sets
- Creating grading objects
- Creating grading infills
- Editing grading objects
- Creating grading transitions

**Parcels**
- Lines and Curves
- Introduction to Parcels
- Creating and Editing Parcels
- Renumbering Parcels
- Parcel Reports
- Parcel Labels
- Parcel Tables