AutoCAD Civil 3D Survey Level

Training details

DESCRIPTION

AutoCAD® Civil 3D® software is a Building Information Modeling (BIM) solution for civil engineering design and documentation. AutoCAD Civil 3D helps civil engineering professionals working on transportation, land development, and water projects stay coordinated and more easily and efficiently explore design options, analyze project performance, and deliver consistent, higher quality documentation—all within a familiar AutoCAD® environment. Perform geospatial analysis and extend Civil 3D model data for storm water analysis and interactive
3D simulations and visualizations. You can also generate quantity takeoff information and support automated machine guidance during construction. Civil 3D helps you gain the competitive advantage of BIM to deliver more innovative project solutions.

OBJECTIVES:

Enable trainees to do the following:
Students will learn basic and advanced topics, including how to import field equipment survey data, parcel creation, grading. In addition, to advanced topics in points, surfaces.

TRAINING STRUCTURE:

AutoCAD Civil 3D Survey level	10 class x 2.5 hours = 25 hours

COURSE TEXTBOOKS AND OTHER READING MATERIALS

We recommend the following resources:

- Autodesk Mastering AutoCAD Civil 3D
- Autodesk AutoCAD Civil 3D Essentials

Web Resources:

- AUTOCAD CIVIL 3D Overview
- Civil 3D forums

PREREQUISITES:

- Basic knowledge and skills about using computers.
- Surveying background is recommended

COURSE GRADING:

Attendance 40% Assignments (workshop + 2 projects)
60% To pass the course and receive both Autodesk certificate & CAD MASTERS certificate you should:

- Attend at least 80% of course hours.
- Score more than 70% as a total score.

AUTOCAD CIVIL 3D SURVEY LEVEL – COURSE OUTLINE

This course including the following:

Understanding the AutoCAD Civil 3D Environment

- The Prospector & Settings Tabs.
- The Ribbon and Application menu.
- Object and Label Styles.
- Modify Drawing Settings, Viewport Scaling, and Text Size.
- Using Templates and Parameters.

Introduction to Points

- Import and Export Format.
- Create Points.
- Points operations.
- Manage Points.
- Use Grips to Control Graphical Point Display.
- Create a Point Table.

Surfaces

- Types of Surface Creation.
- Modify the Surface Properties.
- Edit a Surface.
- Assign a Contour Style and Apply Surface Labels.

Optimizing Grading Tools

- Feature Lines
  - Working with Feature Lines – Overview
  - Creating Feature Lines
  - Editing Feature Lines
  - Creating Feature Lines from Objects
  - Creating Feature Lines from Corridors
  - Creating Feature Lines from Alignments
- Create Grading
  - Working with the Grading Tools – Overview
  - Calculate Grading Volumes
  - Working with the Grading Creation Tools
  - Create complex grading solutions
  - Creating a Final Finished Ground Surface

Parcels

- Parcels Overview
  - Introduction to Parcels
- Subdividing Parcels
  - Creating and Editing Parcels by Layout Overview
  - Creating and Editing Parcels
  - Renumbering Parcels
- Parcel Reports, Annotation, and Tables
  - Parcel Reports
  - Parcel Labels
  - Parcel Tables

Survey

- Working with the Survey Tools - Overview
- Working with Survey Databases
- Creating a Figure Prefix Database
- Setting up Line Work Code Sets
- Importing Point Files and Field books
- Coordinate System & Convert between them
- Travers Adjustment

Exchanging Data with Other Applications

- Importing Data from Land Desktop
- Working with LandXML Data
- Exporting Civil 3D Data to AutoCAD