

# **AutoCAD for Civil Engineers**

# (Duration: 80 Hrs)

# **Course Curriculum**

# AutoCAD 2D

# Chapter 1: Getting started

- About Autodesk & AutoCAD
- CAD History
- Graphical User Interface
- Application Menu
- Workspaces
- Ribbon
- File Tabs
- Accessing Help
- Drawing Templates
- Standards Based Design
- Create New Drawings and Templates

# Chapter 2: Object Property & Layer Management

- Managing Layers
- Configure Object Property Settings
- Automatic Management of Layers
- Layer Functions and Display

# **Chapter 3: Drawing Geometry**

- Drawing Creation Workflows and Organization
- Structuring Data in Drawings
- Reusing and Editing Structured Data

# Chapter 4: Tools for Creating Key Geometry

- Core Design Tools: Creating Rectangles, Placing Hatch, Fillets, Chamfers, Contours
- Power Snaps
- Centerlines
- Construction Lines
- Designing with Lines
- Adding Standard Feature Data for Holes and Slots

# **Chapter 5: Tools for Manipulating Geometry**

- Editing Tools
- Power Commands
- Associative Hide

# **Chapter 6: Creating Drawing Sheets**

• Model Space Views in Layouts

- Creating Drawing Sheets in Model Space
- Annotation
- Title Blocks and Drawing Borders

### **Chapter 7: Dimensioning and Annotating Drawings**

- Annotation and Annotation Symbols
- Creating Dimensions
- Editing Dimensions

#### **Chapter 8: Setting Up a Layout**

- Printing Concepts
- Working in Layouts
- Creating Layouts
- Guidelines for Layouts

### **Chapter 9: File Management**

- Import & Export
- DWG Files
- IGES Files
- Project Documentation

#### **Chapter 10: Plotting & Printing**

- Printing Layouts
- Print & Plot Settings
- Projects Printing / Plotting

### AutoCAD 3D

#### Chapter 1: The AutoCAD Civil 3D Interface

- AutoCAD Civil 3D GUI
- AutoCAD Civil 3D Toolspace
- AutoCAD Civil 3D Panorama
- Workshops

#### **Chapter 2: Project Management**

- AutoCAD Civil 3D Projects
- Sharing Data
- Using Data Shortcuts for Project Management

#### Chapter 3: Parcels

- Lines and curves
- Introduction to Parcels
- Creating and Editing Parcels
- Parcel Reports, Labels, Tables

#### **Chapter 4: Survey**

- Survey Workflow Overview
- Survey Figures
- Points
- Importing Survey Data
- Point Groups

#### **Chapter 5: Surfaces**

- Surface Processes
- Surface Properties
- Contour Data
- Other Surface Data
- Breaklines and Boundaries
- Surface Labels
- Surface Volume Calculations
- Surface Analysis Display

## **Chapter 6: Alignments**

- Introduction to Alignments
- Alignment Properties
- Labels and Tables

## **Chapter 7: Profiles**

- Create a Profile View Style
- Create Profiles from Surface
- Create Profile Wizard
- Create and Edit Profiles

## **Chapter 8: Corridors**

- Assembly Overview
- Modifying Assemblies
- Creating Corridor and it's properties
- Corridor Surfaces
- Visualization

## Chapter 9: Grading, Pipe Networks

- Feature Lines
- Grading Tools
- Modifying Grading
- Pipe Configuration
- Creating Networks
- Editing Piping Networks
- Annotating Pipe Networks

# **Chapter 10: Plan Production**

- Plan Production Tools
- Plan Production Objects
- Creating Sheets
- Sheet Sets

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