

ATC Training: Mastering AutoCAD Civil 3D 2011

Course Description

Mastering Civil 3D covers an overview of key concepts and the software's interface. Delegates learn how elements of the dynamic engineering program work together; discover the best methods for creating, editing, displaying, and labelling all of a civil engineering projects' elements; gives detailed coverage of surveying, points, alignments, surfaces, profiles, corridors, grading, LandXML and LDT Project Transfer, cross sections, pipe networks, visualization, sheets, and project management as well as Vault and data shortcuts. *Mastering Civil 3D* also includes the elements required to pass the Civil 3D 2011 Certified Associate and Certified Professional exams.

Objective

To provide new AutoCAD Civil 3D users with an understanding of the software's core functionality and features so that they can go from field to finish with a successful design. Users will have a solid grounding in the software so that they can immediately be productive using AutoCAD Civil 3D.

Who Should Attend

New AutoCAD Civil 3D 2011 users or other Autodesk software users who want to learn the core features and functionality of AutoCAD Civil 3D.

Prerequisites

Before starting this course, delegates should have a working knowledge of AutoCAD. It is also recommended that delegates have a working knowledge of Microsoft® Windows® Vista, Microsoft® Windows® XP or Microsoft® Windows® 2000 and know how to navigate the Internet.

Course Code: EM0615_Civil2011ES

Course Duration: 3 days

File Name: TRN_AIT_ATC_Civil2011_Essentials_240111_DG_v1.doc
Date: 27 January 2011

Autodesk®
Authorised Training Centre
Authorised Certification Centre

Autodesk®
Approved Instructor

ATC Training: Learning AutoCAD Civil 3D 2011Continued

Course Outline

AutoCAD Civil 3D Environment

- Windows on the Model
- It's All About Style
- The Underlying Engine
- Labeling Lines and Curves
- Creating Curves
- Using Transparent Commands
- Using Inquiry Commands
- Establishing Drawing Settings

Lay of the Land: Survey

- The Survey Tab
- Exploring the Survey Database
- Using the Figure Prefix Database
- Using the Survey Data Wizard
- Automatic line generation from Points and Code Sets

X Marks the Spot: Points

- Anatomy of a Point
- Creating Basic Points
- Basic Point Editing
- Point Styles
- Point Label Styles
- Point Tables
- User-Defined Properties

The Ground Up: Surfaces in Civil 3D

- Digging In
- Creating Surfaces
- Refining and Editing Surfaces
- Surface Styling and Analysis
- Comparing Surfaces
- Labeling the Surface
- Calculating Volume from two surfaces
- Creating Isopachyte surface
- Viewing and analysing Isopachyte surfaces

Don't Fence Me In: Parcels

- Creating and Managing Sites
- Creating a Boundary Parcel
- Creating a Wetlands Parcel
- Creating a Right-of-Way Parcel
- Creating Subdivision Lot Parcels Using Precise Sizing Tools
- Creating Open Space Parcels Using the Free Form Create Tool
- Editing Parcels by Deleting Parcel Segments
- Best Practices for Parcel Creation
- Labeling Parcel Areas
- Labeling Parcel Segments

Cut to the Chase: Profiles

- Elevate Me
- Profile Display and Stylization

Slice and Dice: Profile Views in Civil 3D

- A Better Point of View
- Profile Utilities
- Editing Profile Views

Templates Plus: Assemblies and Subassemblies

- Subassemblies
- Building Assemblies
- Working with Generic Subassemblies
- Working with Daylight Subassemblies
- Saving Subassemblies and Assemblies for Later Use

Easy Does It: Basic Corridors

- Understanding Corridors
- Creating a Simple Road Corridor
- Corridor Anatomy
- Adding a Surface Target for Daylighting
- Applying a Hatch Pattern to a Corridor
- Creating a Corridor Surface
- Performing a Volume Calculation
- Creating a Corridor with a Lane Widening

The Road Ahead: Advanced Corridors

- Getting Creative with Corridor Models
- Using Alignment and Profile Targets to Model a Roadside Swale
- Modeling a Peer-Road Intersection
- Modeling a Cul-de-sac
- Modeling a Widening with an Assembly Offset
- Using a Feature Line as a Width and Elevation Target

Stacking Up: Cross Sections

- The Corridor
- Lining Up for Samples
- Creating the Views
- Creating a Single-Section View
- It's a Material World
- A Little More Sampling
- Annotating the Sections

The Tool Chest: Parts Lists and Part Builder

- Planning a Typical Pipe Network: A Sanitary Sewer Example
- The Part Catalog
- Part Builder
- Part Styles
- Part Rules
- Parts List

ATC Training: **Learning AutoCAD Civil 3D 2011**Continued

Course Outline

Running Downhill: Pipe Networks

- Exploring Pipe Networks
- Pipe Network Object Types
- Creating a Sanitary Sewer Network
- Changing Flow Direction
- Editing a Pipe Network
- Creating an Alignment from Network Parts
- Drawing Parts in Profile View
- Adding Pipe Network Labels
- Creating an Interference Check between a Storm and Sanitary Pipe Network

Working the Land: Grading

- Working with Grading Feature Lines
- Grading Objects

Sharing the Model: Data Shortcuts

- What Are Data Shortcuts?
- Publishing Data Shortcut Files
- Using Data Shortcuts

Teamwork: Vault Client and Civil 3D

- Vault and Project Theory
- Working in Vault
- Team Management in Vault

Out the Door: Plan Production

- Preparing for Plan Sets
- Prerequisite Components
- Using View Frames and Match Lines
- Creating Plan & Profile Sheets
- Creating Section Sheets
- Supporting Components

Playing Nice with Others: LDT and LandXML

- What Is LandXML?
- Handling Inbound Data
- Sharing the Model

Get The Picture: Visualization

- AutoCAD 3D Modeling Workspace
- Visualizing Civil 3D Objects

Projecting the Cost: Quantity Takeoff

- Inserting a Pay Item List and Categories
- Keeping Tabs on the Model
- Inventory Your Pay Items

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

AIT Spatial Workshops

As an alternative to the standard ATC course, we are also able to provide an AutoCAD Civil 3D 2011 Workshop covering a selection of those topics listed above. If you are interested in undertaking an AutoCAD Civil 3D 2011 Workshop, please contact us and we can discuss your bespoke requirements. You may also wish to incorporate items from two, maybe three different course outlines. We can accommodate this easily with a bespoke workshop customised to your needs.