



AUTODESK/AUTOCAD TRAINING

Autodesk Civil 3d

Master Autodesk Civil 3D to design roads, sites, and infrastructure projects with efficiency and precision. Develop essential skills for civil engineering.

DURATION

Flexible

LEVEL

Intermediate

FORMAT

Instructor-Led

- Globally Recognized Certification

- Expert-Led Hands-On Training

- Flexible Scheduling

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COURSE OVERVIEW

This intermediate-level Autodesk Civil 3D course is meticulously designed for civil engineering professionals, surveyors, and CAD technicians aiming to elevate their proficiency in infrastructure design and documentation. You will delve deep into the core functionalities of Autodesk Civil 3D, mastering its dynamic tools for site design, corridor modeling, pipe network analysis, and surface creation. The curriculum emphasizes a hands-on approach, ensuring you gain practical experience with industry-standard workflows that drive efficiency and accuracy in complex civil projects. Beyond basic drafting, this course equips you with the skills to generate intelligent models, perform advanced analyses, and create comprehensive documentation packages. It leverages Civil 3D's powerful object-oriented environment, which is crucial for successful Building Information Modeling (BIM) workflows in civil engineering. Upon completion, you will be adept at transforming raw survey data into actionable design models, performing earthwork calculations, and producing high-quality construction documents, significantly enhancing your project delivery capabilities. The professional benefits of this course are substantial, enabling you to take on more advanced project responsibilities, improve design accuracy, reduce costly errors, and streamline collaboration across project teams. By mastering Autodesk Civil 3D, you position yourself as a highly valuable asset in the competitive civil engineering and infrastructure development sectors, capable of tackling sophisticated design challenges with confidence and precision. This expertise is directly transferable to real-world projects, boosting your career trajectory and professional recognition.

Level	Intermediate
Vendor	Autodesk/AutoCAD

COURSE CURRICULUM

01 Module 1: Advanced Data Management and Surface Modeling

- Importing and managing survey data (points, point groups, survey figures)
- Creating and editing advanced Civil 3D surfaces from various data sources
- Analyzing surfaces: contour analysis, slope analysis, watershed analysis
- Performing volume calculations between surfaces (cut/fill analysis)

02 Module 2: Alignments, Profiles, and Corridors

- Designing complex horizontal alignments with advanced controls and criteria
- Creating and editing vertical profiles for roads and utilities
- Developing advanced corridor models for roads, railways, and grading features
- Understanding subassembly components and creating custom subassemblies
- Targeting alignments, profiles, and surfaces within corridor models

03 Module 3: Parcel Creation and Site Design

- Creating parcels from objects and using various parcel creation methods
- Applying parcel styles and labeling for property and subdivision layouts
- Advanced grading techniques using grading objects and feature lines
- Optimizing site designs for drainage and earthwork balance

04 Module 4: Pipe Network Design and Analysis

- Designing gravity pipe networks (storm sewers, sanitary sewers)
- Creating pressure pipe networks (water lines)
- Performing interference checks and basic hydraulic analysis for pipe networks
- Generating pipe network profiles and section views

05 Module 5: Quantity Take-off and Visualization

- Generating detailed quantity take-off reports for materials and earthwork
- Creating advanced section views for construction documentation
- Utilizing data shortcuts and xrefs for collaborative project environments
- Basic rendering and visualization techniques for Civil 3D models

06 Module 6: Plan Production and Data Collaboration

- Automating sheet set creation for plan and profile sheets
- Annotating and labeling Civil 3D objects dynamically
- Creating layout views and plotting civil engineering drawings
- Exporting data for GIS integration and other platforms
- Best practices for project setup and data management in Civil 3D

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Senior Civil CAD Technician specializing in infrastructure development**
- > **Land Development Designer focused on site grading and road design**
- > **Infrastructure Modeler proficient in BIM workflows for large-scale projects**

FREQUENTLY ASKED QUESTIONS

Q: What prior experience or software knowledge is recommended before enrolling in this intermediate Autodesk Civil 3D course?

This course is designed for individuals with foundational knowledge of AutoCAD and basic exposure to civil engineering principles. While not strictly mandatory, prior experience with basic Civil 3D drafting or an introductory course would be highly beneficial, as this program delves into intermediate and advanced design functionalities rather than basic interface navigation.

Q: How will mastering Autodesk Civil 3D enhance my ability to design and analyze complex civil engineering projects compared to traditional CAD methods?

Mastering Autodesk Civil 3D will transform your approach to civil projects by enabling dynamic, object-oriented design. Unlike traditional CAD, Civil 3D allows for intelligent models where changes in one element automatically update related components (e.g., modifying an alignment instantly updates profiles and corridors). This drastically improves design accuracy, facilitates complex analyses like surface and pipe network analysis, streamlines quantity take-offs, and significantly reduces the time spent on design iterations and documentation for large-scale infrastructure.

Q: Beyond generating basic plans, what advanced design and analysis features will I gain proficiency in, and how are they applied in real-world infrastructure projects?

You will gain proficiency in advanced features such as dynamic corridor modeling for complex road geometries (intersections, cul-de-sacs), comprehensive site grading optimization, detailed cut/fill volume calculations for earthwork balancing, and hydraulic analysis for gravity pipe networks. In real-world projects, these skills are critical for designing efficient highway interchanges, developing sustainable land subdivisions with optimized drainage, ensuring accurate material estimations for cost control, and verifying the functionality of stormwater and sanitary sewer systems before construction begins.

ABOUT COMPUTER PRIDE



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With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

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Take the next step in your technology career.

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