Publication date : 01/29/2024

Course : Civil 3D, 3D infrastructure modeling for civil engineering

Practical course - 4d - 28h00 - Ref. CID
Price : 1650 € E.T.

AutoCAD Civil 3D supports building information modeling (BIM) workflows. You'll learn all the features of AutoCAD Civil 3D. You'll see how to create and modify points, set up road networks and create surfaces.

Teaching objectives

At the end of the training, the participant will be able to:

- Using the Civil 3D interface
- Conceptualizing surfaces
- Managing road layouts
- Designing pipe networks

Intended audience

Civil engineering professionals, public works engineers, draughtsmen and planners in regional planning.

Prerequisites

Good knowledge and practice of AutoCAD software required.

Course schedule

1 Software fundamentals

- Les principes de bases.
- System installation and configuration.
- User documentation.
- BIM technology.

PARTICIPANTS

Civil engineering professionals, public works engineers, draughtsmen and planners in regional planning.

PREREQUISITES

Good knowledge and practice of AutoCAD software required.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

2 The Civil 3d interface

- Environment and workspace.
- 3D objects: how to visualize them?
- Tool windows.
- Panorama modifications and information boxes.
- About drawing parameters.
- Label styles.
- Migration and transfer of customized settings.
- Autodesk Civil 3D's transparent controls.

Hands-on work
Getting to grips with the interface.

3 Points management

- Create and modify points.
- General parameters.
- Creation of point groups.
- Import and export external files.

Hands-on work
Setting up point groups.

4 Surface creation

- Creating a surface: basic parameters.
- Conceptualize a surface from data.
- Create surface styles.
- Working with large surfaces.
- Modify surface geometry.
- Surface volumes.
- Perform surface analysis.
- Use of masks, limits, labels, etc.

Hands-on work
Multi-surface design.

5 Create an earthwork construction plan

- Characteristic terrain lines.
- Earthwork design.
- Earthworks parameters.
- Modify a surface by moving it.
- Calculating volumes.

Hands-on work
Creation of an earthwork plan in the environment.

6 Road layouts

- Horizontal road axes (tracing and modification).
- Create long and fast profile lines.
- Modify and draw the projected profile (vertical).
- The design assistant.
- Label expressions.

Hands-on work
Creation of a road axis in a built-up area.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

7 3D road projects

- Understanding sub-assemblies.
- Assembly properties.
- Create and modify simple and complex corridors.
- Design surfaces on a 3D project.

Hands-on work
Road project modeling.

8 Defining cross-sections and materials

- Edit and insert volume report.
- Cross-sections.
- Section views.
- Calculating material volumes.
- Materials management.

Hands-on work
Placing materials in an urban environment.

9 Pipe network design

- Style specifications.
- One network per network type.
- Pipe rerouting.
- Modeling network layouts.
- Management of pipe network labels.
- Hydraflow extensions.

Hands-on work
Design of underground pipe networks.

10 Topography analysis

- User interface and topography functionality.
- Phases of the surveying project.
- Topography objects.
- Topography styles and display.
- Topography databases.
- Topography networks.

Dates and locations

REMOTE CLASS
2026 : 2 June, 13 Oct.

PARIS LA DÉFENSE
2026 : 2 June, 13 Oct.