

Bentley Microstation User

Course Objectives

- To provide participants with a strong foundation in Bentley MicroStation CONNECT Edition for 2D drafting and design documentation workflows.
- To develop skills in creating, editing, and managing engineering drawings using precision drafting tools and industry standards.
- To enable learners to efficiently use annotation, sheet composition, and publishing tools for project deliverables.
- To build competency in using cells, references, and display controls for civil and infrastructure design projects.
- To prepare users for practical application of MicroStation in real-world engineering environments.

Course Outcomes

- Participants will be able to navigate the MicroStation CONNECT Edition interface and manage project files effectively.
- Learners will create accurate 2D drawings using drawing, modification, and precision placement tools.
- Users will apply annotations, dimensions, and sheet composition techniques for professional documentation.
- Participants will utilize cells, references, and level management to improve drafting productivity.
- Learners will generate print-ready outputs and published deliverables for engineering projects.

Target Audience

- Civil engineers, CAD technicians, and design professionals involved in drafting and documentation.
- Beginners who want to learn Bentley MicroStation from fundamentals to advanced user level.
- Infrastructure and transportation professionals working on road, rail, and utility projects.
- Students and fresh graduates seeking CAD software skills for engineering careers.

Course Outline

The course comprises **16-hours** of theory and labs and is divided into **10** different Modules. Each chapter will be followed by hands-on lab exercises to reinforce learning and gauge understanding of the topics covered.

Table of Contents: -

Module 1: Introduction to MicroStation CONNECT Edition

- Overview of MicroStation CONNECT Edition
- Interface, Ribbon, and Workflow Navigation
- Understanding Design Files (DGN/DWG)
- Views, Models, and Workspaces
- Basic File Management and Settings

Module 2: Controlling the Display of Designs for Civil Designers

- View Controls and Window Management
- Zoom, Pan, Rotate, and Fit View
- Display Styles and Visualization Modes
- Level Display and Filters
- Saved Views and View Attributes

Module 3: Using General Tools in MicroStation CONNECT Edition for the Civil Designer

- Selection Tools and Element Information
- Measure, Analyze, and Inquiry Tools
- AccuSnap and Precision Placement
- AccuDraw Fundamentals
- Shortcut Keys and Productivity Tools

Module 4: Drawing with MicroStation for Civil Designers

- Creating Lines, Shapes, and SmartLines
- Arcs, Circles, and Curves
- Coordinate Input Methods
- Snaps and Locks for Accurate Drawing
- Basic Geometry Construction

Module 5: Additional Drawing Tools

- Complex Chains and Complex Shapes
- Patterning and Hatching
- Multi-Line and Parallel Tools
- Construction Lines and Temporary Geometry
- Reusable Drawing Methods

Module 6: Manipulating and Modifying Elements for Civil Designers

- Move, Copy, Rotate, and Scale
- Trim, Extend, Break, and Join
- Mirror and Array Tools

- Modify Curves and Shapes
- Undo, Redo, and Revision Workflow

Module 7: Working with Cells for Civil Designers

- Introduction to Cells
- Creating and Saving Cells
- Cell Libraries and Standards Symbols
- Shared Cells and Parametric Cells
- Editing and Updating Cells

Module 8: Annotating Designs for Civil Designers

- Text Placement and Editing
- Text Styles and Notes
- Dimensions – Linear, Angular, Radial
- Leaders, Callouts, and Labels
- Annotation Scaling and Standards

Module 9: Composing Sheets for Civil Designers

- Models vs Sheets Concepts
- Creating Sheet Models
- Title Blocks and Borders
- Reference Attachments in Sheets
- Multi-Sheet Project Documentation

Module 10: Printing and Publishing for Civil Designers

- Print Setup and Page Configuration
- Plotting Individual Sheets
- Batch Printing with Print Organizer
- PDF Publishing and Deliverables