

Microstation Fundamentals

Overview

MicroStation Fundamentals course is designed for the new MicroStation user who requires comprehensive training in MicroStation. It incorporates the features, commands, and techniques for creating, editing, and printing drawings with MicroStation. Hands-on exercises throughout the courseware explore how to create 2D production drawings.

Prerequisites

It is recommended that delegates have a working knowledge of one or more of the following:

- Attended a [Introduction to Technical Drawing](#) OR have experience with draughting, design, or engineering principles.
 - Computer Literacy Skills
 - Understanding and Reading of Technical Drawings
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Course Outline

Introduction

- Starting MicroStation
- Using MicroStation Manager
- Mouse Functions in MicroStation
- A Tour of MicroStation proper
- Using Toolboxes
- The Tools Menu
- Getting help

Drawing Navigation

- Working with Multiple views
- MicroStation's View Control
- Drawing Navigation

- Other Windows Menu Commands
- Selecting an Existing New Group

Preparing to Draw

- MicroStation's Disk-based nature
- Seed files
- Creating a custom seed file

Preparing MicroStation

- User Preferences

Your First Session

- Place Element Tools
- Introducing to Element manipulation

Introduction to AccuDraw

- Automatic Start
- On / Off Toggle
- The input focus
- Precision input with AccuDraw
- Rotating AccuDraw to the view orientation

Introduction to AccuSnap

- Exercise: Exercising AccuSnap for the first time
- Exercise: Manually executing a Snap
- Exercise: Putting together the puzzle

Advanced Designing with AccuDraw

- AccuDraw Angles
- The Angle Mode
- Setting the AccuDraw origin
- Setting Smart lock

Advanced Snapping with AccuSnap

- Enabling / Disabling AccuSnap
- AccuSnap and the Snap Mode settings
- Near Snap point
- Mid point Snap
- Centre Snap
- Origin Snap
- Bisector Snap
- Intersect Snap

- Tangent point Snap
- Perpendicular point Snap
- Optional Exercises: Using AccuSnap with the Snap modes & Access AccuSnap settings

Working with Arc's and Ellipses

- Placing circles
- Placing Arcs

Working with the SmartLine Tool

- SmartLine's "SMARTS"
- SmartLine placement settings

Working with Shapes

- Creating old fashioned drawing templates
- Exercise: Creating the rectangular cutouts
- The Place Shape Tool
- Exercise: Creating the parallelogram cutout
- The Place Orthogonal tool
- The Place regular Polygon tool

Measurement

- Making measurements
- The measurement tools
- The measure radius and measure angle tools
- The measure area tool
- Other measure tools

Element Attributes / Symbology

- Element attributes
- Colour
- Line Weight
- Active element transparency
- Active element priority
- Fill
- The change element attributes tool
- Match / Change by
- Adding colour fill to solid elements
- Changing the display order of elements

Manipulation

- Move parallel
- Scale
- Rotate

- Rotating elements
- Mirror element

Element Modifiers

- Modify element
- Extend element
- Extending two elements to intersection
- Extend element to intersection
- Trim elements
- IntelliTrim
- Construct circular fillet
- Construct chamfer

Complex Chains, Shapes & Regions

- Creating complex chains & shapes
- Creating Region
- Complex shapes with Simplified geometry

Returning Elements to their Simple Existence

- The Drop element tool
- Left open on purpose

MicroStation's Levels

- A quick word or two about overlay drafting
- Level Display
- Apply to all views
- Pop-up menu to access additional options
- Active level
- Level Manager
- Creating and Deleting levels
- Symbology

Selecting Techniques

- More Elements Selection
- Select by attributes

Working with a Fence

- Manipulating multiple elements
- Using fences
- Manipulating fence contents

Working with Cells

- How we use cells
- The creation of cells
- Types of cells
- Creating a cell

Hatching and Patterning

- Pattern settings
- Pattern methods
- The Snappable pattern option
- Associative patterning
- Hatch area
- Crosshatch area

Placing Text and Annotation

- Placing text
- Changing text after the fact
- Changing text attributes
- Place note
- Text Styles
- Important text attributes
- Placing text with a text style

Placing Dimensions

- The importance of Dimensioning
- Alignment
- Association Lock
- Dimension Size with arrows
- Dimension Angle Between lines
- Dimension Radial

Referencing

- References Dialogue box

Plotting

- The final plot scale - an early consideration
- Plotting interface

Pre V8 Interoperability

- Introduction
- V7 DGN files
- Backwards compatibility - Saving V8 to V7 files

DWG Access

- Introduction
- Reference DWG data in MicroStation
- Using MicroStation to directly edit DWG file
- MicroStation's workmode
- DWG options
- Saving DGN data as DWG data
- Creating several DWG files from DGN references

Design Problem 1

- Construct the concrete Curb, Barrier and Bea