

Bentley OpenPlant Modeler

COURSE CONTENT

GET IN TOUCH



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About Multisoft

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About Course

Bentley OpenPlant Modeler Training by Multisoft Systems offers a structured learning path for professionals working with intelligent 3D plant design and engineering projects. The course covers equipment creation, piping specifications, pipeline routing, component placement, engineering properties, model validation, coordination, and drawing production while emphasizing practical plant modeling workflows. Through instructor-led sessions and hands-on exercises, participants gain relevant skills for handling coordinated plant models across process, mechanical, piping, and industrial engineering environments.

Module 1: Introduction to Bentley OpenPlant Modeler

- ✓ Overview of OpenPlant Modeler
- ✓ Role of OpenPlant Modeler in plant engineering
- ✓ Understanding intelligent 3D plant modeling
- ✓ OpenPlant applications and engineering ecosystem
- ✓ Typical plant design lifecycle
- ✓ Understanding multidiscipline plant projects
- ✓ Model-based engineering concepts
- ✓ Overview of project deliverables
- ✓ Introduction to engineering data and component intelligence

Module 2: OpenPlant Environment, Interface & Project Setup

- ✓ Understanding the OpenPlant Modeler interface
- ✓ Ribbon, menus, dialogs, and tool organization
- ✓ Working with views and view controls
- ✓ Navigating 3D plant models
- ✓ Understanding project and workset environments
- ✓ Opening and managing design files
- ✓ Project units and coordinate considerations
- ✓ Working with reference models
- ✓ Model organization and file management
- ✓ Basic display and visualization settings
- ✓ Setting up the modeling workspace

Module 3: Plant Modeling Fundamentals & Project Standards

- ✓ Understanding plant model hierarchy
- ✓ Plant areas, units, systems, and services
- ✓ Engineering component classes
- ✓ Component properties and attributes
- ✓ Understanding connectivity in intelligent models
- ✓ Working with plant design standards
- ✓ Model naming and tagging concepts
- ✓ Understanding specifications
- ✓ Working with engineering coordinates
- ✓ Placement and modification fundamentals
- ✓ Selection and manipulation of plant objects
- ✓ Maintaining model consistency

Module 4: Equipment Modeling and Placement

- ✓ Equipment modeling concepts
- ✓ Placing standard equipment
- ✓ Working with equipment classes
- ✓ Creating equipment using available primitives
- ✓ Defining equipment dimensions
- ✓ Equipment orientation and positioning
- ✓ Working with equipment properties
- ✓ Equipment tags and identification
- ✓ Creating and positioning equipment nozzles

- ✓ Nozzle orientation and connectivity
- ✓ Modifying existing equipment
- ✓ Copying and reusing equipment
- ✓ Working with common plant equipment such as:

1. Tanks
2. Vessels
3. Pumps
4. Exchangers
5. Columns

- ✓ Equipment modeling exercises

Module 5: Piping Modeling and Routing

- ✓ Introduction to intelligent piping design
- ✓ Understanding pipelines and line information
- ✓ Creating a new pipeline
- ✓ Defining piping service and specification
- ✓ Pipe routing concepts
- ✓ Routing pipes in 3D space
- ✓ Routing using coordinates and directions
- ✓ Horizontal and vertical routing
- ✓ Connecting piping to equipment nozzles
- ✓ Continuing existing pipelines
- ✓ Changing routing direction
- ✓ Working with pipe sizes
- ✓ Modifying existing pipe routes
- ✓ Moving and adjusting piping components

- ✓ Understanding piping connectivity
- ✓ Managing connected components
- ✓ Practical piping layout exercises

Module 6: Piping Components, Fittings & Connections

- ✓ Placement of piping components
- ✓ Working with elbows
- ✓ Tees and branch connections
- ✓ Reducers and transitions
- ✓ Flanges
- ✓ Gaskets
- ✓ Valves
- ✓ Couplings and specialty components
- ✓ Component orientation and alignment
- ✓ Inline component placement
- ✓ Branch creation techniques
- ✓ Connecting components to existing piping
- ✓ Component replacement
- ✓ Changing component properties
- ✓ Understanding connection relationships
- ✓ Checking piping continuity
- ✓ Practical component placement scenarios

Module 7: Specifications, Catalogs & Component Data

- ✓ Understanding OpenPlant specifications

- ✓ Relationship between catalogs and specifications
- ✓ Specification-driven component selection
- ✓ Working with piping specifications
- ✓ Selecting components according to specification
- ✓ Understanding component classes
- ✓ Engineering properties associated with components
- ✓ Size and rating considerations
- ✓ Material and specification information
- ✓ Reviewing component data
- ✓ Modifying editable component properties
- ✓ Understanding project-specific component requirements
- ✓ Importance of data consistency
- ✓ Using specifications within plant modeling workflows

Module 8: Structural and Supporting Plant Elements

- ✓ Understanding structural context in plant models
- ✓ Working with referenced structural models
- ✓ Positioning equipment relative to structures
- ✓ Piping arrangement around structural elements
- ✓ Modeling considerations for platforms and access areas
- ✓ Pipe support concepts
- ✓ Understanding support locations
- ✓ Placement considerations for piping supports
- ✓ Equipment and piping clearance considerations
- ✓ Multidiscipline spatial coordination
- ✓ Identifying physical interferences

- ✓ Organizing plant layout around structural constraints

Module 9: Model Data, Properties & Engineering Information

- ✓ Understanding data-driven plant models
- ✓ Reviewing component properties
- ✓ Editing engineering information
- ✓ Equipment data management
- ✓ Pipeline and piping component information
- ✓ Tags and identifiers
- ✓ Working with engineering attributes
- ✓ Searching and locating model components
- ✓ Selecting objects based on engineering information
- ✓ Reviewing model relationships
- ✓ Maintaining consistency between geometry and data
- ✓ Understanding engineering information throughout the model lifecycle
- ✓ Model data validation considerations

Module 10: Drawing Production, Views & Documentation

- ✓ Introduction to plant documentation workflows
- ✓ Preparing models for drawing generation
- ✓ Creating useful model views
- ✓ Working with plan and elevation views
- ✓ Section and detail considerations

- ✓ Understanding drawing composition
- ✓ Annotation concepts
- ✓ Component identification in documentation
- ✓ Dimensions and engineering information
- ✓ Drawing presentation considerations
- ✓ Updating documentation following model changes
- ✓ Reviewing drawing output
- ✓ Preparing engineering models for downstream deliverables

Module 11: Model Review, Coordination & Interoperability

- ✓ Multidiscipline plant design coordination
- ✓ Working with reference files
- ✓ Combining equipment, piping, and structural information
- ✓ Model visualization techniques
- ✓ Reviewing plant layouts
- ✓ Identifying design conflicts
- ✓ Checking equipment accessibility
- ✓ Reviewing piping routes
- ✓ Understanding clearance requirements
- ✓ Coordinating model changes
- ✓ Engineering data exchange concepts
- ✓ Interoperability within Bentley plant engineering workflows
- ✓ Model review and quality considerations
- ✓ Preparing coordinated models for project review

Module 12: Advanced Modeling Workflow & Practical Plant Project

- ✓ Planning an OpenPlant modeling assignment
- ✓ Setting up the plant design environment
- ✓ Organizing equipment and piping information
- ✓ Creating equipment layouts
- ✓ Adding equipment nozzles and connections
- ✓ Creating pipelines
- ✓ Routing process piping
- ✓ Placing valves, fittings, and inline components
- ✓ Applying appropriate specifications
- ✓ Reviewing engineering properties
- ✓ Coordinating piping with surrounding plant elements
- ✓ Checking model connectivity
- ✓ Reviewing model accuracy and consistency
- ✓ Preparing views and engineering documentation
- ✓ Performing model review and corrections
- ✓ End-to-end plant modeling exercise
- ✓ Recommended modeling practices for project environments