

Smart Plant-3D (SP3D) Training

COURSE CONTENT

GET IN TOUCH



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About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

Smart Plant 3D (SP3D) training, offered by Multisoft Systems, is designed to equip participants with the skills and knowledge required to efficiently use SP3D software for plant design and engineering.

Module 1: SP3D Common Training

User Interface

- ✓ Overview
- ✓ Layout

Session Management

- ✓ Session template
- ✓ Session File
- ✓ Options

View Manipulations

- ✓ Common Views
- ✓ Zoom Tool
- ✓ Window Area
- ✓ Refresh View
- ✓ Active View Control
- ✓ Rotate View
- ✓ Looking at Surface

Formatting Active View

- ✓ View Format
- ✓ Surface Style Rules

Filters

- ✓ System
- ✓ Assembly
- ✓ Spatial (Volume or Planes)
- ✓ Logical Permission Group
- ✓ Object Types
- ✓ Properties

Insert Options

- ✓ Control Points / Notes / Hyperlink

Measure

- ✓ Distance
- ✓ Minimum Distance between Objects
- ✓ Angle

Tool Tips

- ✓ Label Editor

Module 2: SP3D Equipment Training

Overview

- ✓ Standard Parametric/Non-parametric Equipment Placement
- ✓ Modeling of equipment using primitive shape
- ✓ 3rd party software – SAT format (Solid Edge v-14)

Aspects

- ✓ Physical, Insulation, Maintenance, and so on ...

Ports

- ✓ Piping port
- ✓ Ducting port
- ✓ Cableway port
- ✓ Conduit port
- ✓ Cable port
- ✓ Foundation Port

Placing Design Equipment

- ✓ Equipment from Catalog (standard)
- ✓ By Shapes

Relationships / Constraints

- ✓ Mate
- ✓ Align
- ✓ Connect
- ✓ Minimum Distance (E-W, N-S, Vertical)
- ✓ Parallel
- ✓ Mate to Tangent Plane

Smart Sketch Options

- ✓ Pinpoint
- ✓ Locate on Display List
- ✓ Locate on List Only

Manipulation Commands

- ✓ Select Command
- ✓ Delete Command
- ✓ Undo Command
- ✓ Move Command
- ✓ Rotate Equipment
- ✓ Rotate Command
- ✓ Open the properties page
- ✓ Copy/Paste Command

Place Imported Shape from File

- ✓ Equipment From SAT file

Place Equipment From PID

- ✓ Retrieving PID
- ✓ Placing Equipment from PID
- ✓ Comparing Data
- ✓ Updating Data

Nozzle Placement

- ✓ Placing Nozzles with Graphics
- ✓ Nozzles with no Graphics
- ✓ Nozzles from PID

Modification

- ✓ Property Page

Module 3: SP3D Structural Training

Overview

- ✓ Grids
- ✓ Coordinate Systems
- ✓ Smart Plant Structure

Grids & Coordinates

- ✓ Grid Wizard
- ✓ Placing Coordinate System
- ✓ Modifying Grids
- ✓ Adding Grid Planes
- ✓ Rotated Coordinate Systems
- ✓ Rotated Planes

Member Types

- ✓ Beams
- ✓ Columns
- ✓ Braces

Member Properties

- ✓ Name Rule - Naming rule
- ✓ Parent System
- ✓ Type Category

- ✓ Type
- ✓ Priority
- ✓ Continuity
- ✓ Cross section
- ✓ Section Standard
- ✓ Section Type
- ✓ Section Name
- ✓ Material
- ✓ Grade
- ✓ Angle
- ✓ Cardinal Point

Place Linear Member System

- ✓ Place Member Ribbon Bar

Frame Connections

- ✓ Flush
- ✓ Seated
- ✓ Centerline
- ✓ Axis
- ✓ Corner Brace
- ✓ Surface
- ✓ Unsupported
- ✓ Manual or Automatic rule-based selection

Vertical Brace Connections

- ✓ Rule-based Offset

Assembly Connections

- ✓ Assembly Connection Ribbon Bar
- ✓ Base Plate
- ✓ Splice

- ✓ Fitted Assembly Connection
- ✓ Corner Gusset Plates

Modifications

- ✓ Attributes
- ✓ Generic Move Command
- ✓ Pin Point
- ✓ Point Along Tool
- ✓ Frame connection

Slabs

- ✓ Coincident plane
- ✓ Offset from plane
- ✓ Angle from plane
- ✓ Point/Normal Vector
- ✓ 3 Point plane

Sketch 2D

- ✓ Basic Sketch 2D overview

Holes / Openings

- ✓ Sketch method
- ✓ Select an opening from Catalog
- ✓ Draw (Sketch 2D)
- ✓ Footings
- ✓ Footing Ribbon Bar
- ✓ Property Page
- ✓ Placement
- ✓ Modifications

Equipment Foundations

- ✓ Equipment Foundation Ribbon Bar

- ✓ Property Page
- ✓ Placement
- ✓ Modifications

Stairs/Ladders

- ✓ Settings
- ✓ Top Support
- ✓ Bottom Support
- ✓ Reference
- ✓ Position
- ✓ System
- ✓ Type
- ✓ Name
- ✓ Width
- ✓ Angle

Handrails

- ✓ Settings
- ✓ Properties
- ✓ Sketch Path
- ✓ Type
- ✓ Modifying Path

Reports

- ✓ Running Reports

Module 4: SP3D Piping Training

Overview

- ✓ Pipeline
- ✓ Pipe Run
- ✓ Features

- ✓ Parts
- ✓ Port
- ✓ Path leg
- ✓ Connections

New Pipe Run

- ✓ Define the Pipe Run properties

Route Pipe Command

- ✓ Length Control Tool
- ✓ Route Pipe Run with Pin Point
- ✓ Angle Control Tool
- ✓ Pipe Run Smart Step Ribbon Bar

Working Plane Control Tool

- ✓ Plane Lock Options

Turn Type option

- ✓ Default Turn Options
- ✓ Selecting a Turn Type

Pipe Select Command

- ✓ Select Filter Options

Delete Command

- ✓ Delete Pipeline
- ✓ Delete Pipe Run
- ✓ Delete feature

Routing From End Features or Nozzle

- ✓ Connecting to End Feature
- ✓ Connecting to Nozzles

Routing To or From a Straight Feature

- ✓ Branch on Pipe Run
- ✓ Intersect to Branch

Insert Component command

- ✓ Selecting a Component
- ✓ Reference Position
- ✓ Point Along option
- ✓ Selecting Different Ports / Flip

Edit Commands

- ✓ Edit Straight Features
- ✓ Edit End Features
- ✓ Edit Run Change Features
- ✓ Editing features

Insert Split command

- ✓ Insert Split ribbon bar

Edit Properties Command

- ✓ Flow Direction
- ✓ Insulation
- ✓ Relation Tab

Route Pipe Run using the offset value

Module 5: SP3D Electrical Training

Overview

- ✓ Electrical System
- ✓ Cableways
- ✓ Cable tray / Conduit
- ✓ Cables

Route Cableway

- ✓ Define Properties
- ✓ Using Pinpoint
- ✓ Using Smart Sketch
- ✓ From End Features
- ✓ To End Features
- ✓ To Straight Features
- ✓ Using Relative Tracking
- ✓ Using Spherical Coordinates
- ✓ Using Offset Option
- ✓ Routing From Ports
- ✓ Placing Transitions / Size Change

Branches

- ✓ Branch on a Run
- ✓ Intersect to Branch
- ✓ Branch using Pinpoint

Insert Component command

- ✓ Selecting a Component
- ✓ Reference Position
- ✓ Point Along option
- ✓ Selecting Different Ports / Flip

Routing Cableway – No Part Spec

- ✓ Routing Cableway

Insert Transition

- ✓ Without offset
- ✓ With Offset

Edit Commands

- ✓ Edit Straight Features
- ✓ Edit End Features
- ✓ Edit Cross Sections

Routing Conduits

- ✓ Conduit System
- ✓ Route Options

Conduit Fittings

- ✓ Insert Conduit Fittings

Place Electrical Equipment

- ✓ Placing Junction Box
- ✓ Placing Light Fixtures
- ✓ Creating MCC
- ✓ Placing Cable/Nozzle Ports

Placing Ducts

- ✓ Placing Ducts using Cableway

Insert Cables

- ✓ Selecting Equipment
- ✓ Selecting Cables
- ✓ Defining Properties

Define Cable Path

- ✓ Selecting Cableways
- ✓ Defining Exit/Entry points

Placing Cable Markers Reports

Reports

Running Reports

SP3D HVAC Training

Route Duct Command

Start routing a Duct Run from:

- ✓ A point in space
- ✓ An existing Duct run
- ✓ An equipment HVAC port

Create Duct Run Dialog Box Define the Duct Run properties

- ✓ System, Name, Spec, Required Flow rate, insulation, Max design velocity and Max. pressure loss.

Insert split Features

Insert Component Features

HVAC Division

Select the End Feature

Insert Transition Features

Insert surface mounted Features

SP3D Isometric Drawings Training

Extracting Pipeline Isometric Drawings

Creating Spools

Extracting Spool Drawings

Isometric Options Browser

Alias Options

Labels

- ✓ Component Note (Type 1 Labels)
- ✓ End Connection (Connection note and nozzle note labels)

- ✓ Misc Spec labels (Pipeline header)
- ✓ Weld list labels
- ✓ Drawing Frame (title block labels)

Title block

- ✓ Attribute MAP
- ✓ Mapping attributes to the border

Material list

- ✓ Fixed - Style 1
- ✓ Variable - Style 2
- ✓ User-defined - Style 3
- ✓ Various material list options
- ✓ Material list labels

Weld list - wdf file

Definitions - ddf file

Creating new isometric style

- ✓ Using your own border template
- ✓ Modifying delivered style xml file to match
- ✓ Bulk loading the style

MTO neutral file

Module 6: SP3D Drawing and Reports Training

Creating Drawings

- ✓ Volume Drawings
- ✓ Snapshot Drawings
- ✓ Manual Drafting
 - Graphic

- Annotation
 - Labels
 - Dimensions
- Title blocks

Running Reports