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SOLIDWORKS Composer - 3 days (21h)

1. Getting Started

- What is the SOLIDWORKS Composer Application?
- Notes on SOLIDWORKS Composer
- SOLIDWORKS Composer terminology
- SOLIDWORKS Composer user interface
- View
- · Navigation Tools
- Updating Views
- · Collaborative Actors
- Camera Views
- Transform
- Creating 2D Output
- · View Mode/Animation Mode

2. Creating Cover and Detail Images

- Rendering tools
- · Camera and Alignment tools
- · Custom Rendering
- Digger

3. Creating an Exploded View

- Visibility tools
- Exploded View
- · Collaborative Actors
- Styles
- · Vector Graphics Output

4. Creating Additional Exploded Views

- Importing Files
- Paper Space
- · Update views With Selected Actors
- Align Actors
- Explode Lines
- Custom Views
- Linking Between Views

5. Creating Bills of Material

- Bills of Material
- · Vector Graphic Output
- Another BOM Table
- Assembly Level BOM
- Assembly Selection Mode

6. Creating a Marketing Image

- · Selections
- Textures
- Lighting
- Scenes
- High Resolution

7. Creating an Animations

- · Timeline Pane
- · Location Keys

8. Creating Interactive Content

- · Views for Animation
- · Improving the Animation
- Digger Keys
- Selections in the Key Track
- Events
- Animating and Collaborative Actors

9. Creating a Walkthrough Animation

- Camera Keys
- Grids
- Adding Views to the Timeline

see Part 2 on next page »





SOLIDWORKS Composer (Part 2)

10. Adding Special Effects to Animations

- Animation Library Workshop
- · Animation Special Effects
- Assembly Selection Mode in Animations
- Scenarios

11. Updating SOLIDWORKS Composer Files

- · Update an Entire Assembly
- · Changing the Geometry of an Actor

12. Working with Projects

- Product Files
- · Product Orientation

13. Publishing from SOLIDWORKS Composer

- · Preparing a File for Publishing
- Publishing to PDF
- · Publishing Inside Microsoft Word
- Publishing to HTML
- Linked SVG Files
- · Publishing Multiple Views



SOLIDWORKS Visualize - 2 days (14h)

1. CAD to SOLIDWORKS Visualize

- · Rendering from CAD
- Importing to Visualize
- Render Selection
- Denoiser
- Appearances
- File Libraries
- Scenes
- Rendering

2. Import Settings and Appearances

- Import Settings Appearances
- Project Description
- Part Grouping
- Structure and Organization
- Selection Tools
- Object Manipulation
- Split
- Copy and Paste
- Appearance Types
- Textures
- · Texture Mapping
- Appearance Type Parameters
- Merge Parts

3. Decals

- Decals
- Decal Feature
- Decals Depth
- Decal Mapping
- Blend Texture
- Multi-Layer Decal Process

4. Cameras

- Cameras
- Aspect Ratio
- Keep Above Floor
- Perspective
- · Camera Orientation
- · Grid Overlay
- · Depth of Field
- Filters

5. Backplates, Environments and Lights

- Scenes
- · New Cutting Plane
- Backplates
- Environments
- Lights

6. Productivity tools

- Multiple Views
- Render All Cameras
- · Time Limit Rendering
- Configurations
- Exports
- Render All Configurations
- Render Queue
- Visualize Boost

Continued »

see Part 2 on next page »



SOLIDWORKS Visualize (Part 2)

7. Animation and Grouping

- Animations
- Groups
- Animation Output
- · Motion Blur
- · Keyframe Animation

8. Camera animations

- · Camera Animations
- Camera Movement with the triad
- Keyframe Properties

9. Animating Appearances, Scenes

- Appearance Animations
- Scene Animations

10. Alternative outputs

- Alternative Outputs
- Turntable
- · Interactive Images
- Panorama View
- Sun Study
- 360° Camera

11. CAD to SOLIDWORKS Visualize

- Simulated physics
- · Shake simulation
- Simulation manager
- Simulation states
- Vehicle simulation



SOLIDWORKS Inspection - 1 day (7h)

*This training's duration is about half a day but we will complete it with personnalized coaching on your models or examples files.

1. Inspection Add-in

- What is SOLIDWORKS Inspection?
- Inspection project
- SOLIDWORKS Inspection manager
- · Export inspection data
- · Design revision
- Manual Ballooning
- · Working with 3D documents

2. Standalone Application

- Overview
- User interface
- Inspection project
- Extracting characteristics
- General characteristic tools
- · Table manager
- · Managing bill of characteristics
- Grids
- Multiple Documents
- Publishing reports
- Drawing revisions

3. SOLIDWORKS Inspection Professional

- Overview
- Loading the inspection professional Add-in
- · Measurements Input
- Publishing reports with inspection results
- · CMM data import

Appendix A: Inspection Report Templates

- · Inspection Report Templates
- Template Editor

Appendix B: Understanding Regular Expressions

Regular Expressions

7. Appendix C: Glossary of Quality Terms

Terminology



SOLIDWORKS MBD - 1 day (7h)

1. Introduction to SOLIDWORKS MBD

- · What is SOLIDWORKS MBD?
- Course Layout
- MBD Using Feature Dimensions
- Sharing 3D Views
- 3D PDF Capabilities
- MBD Using DimXpert
- DimXperts Capabilities
- · eDrawings and MBD
- eDrawings Capabilities
- STEP 242 Files
- MBD and Assemblies
- Steps in the Process

2. Using Feature Dimension and Annotation Views

- · Using Feature Dimensions with MBD
- Default Annotations Views
- Optimizing Settings
- · Adding and Organizing Annotations
- · Adding Reference Dimensions
- · Modifying Dimensions
- Creating a Section Annotation View
- Editing an Annotation View
- · Unassigned Items
- · Creating an Annotation View
- Note Area
- Using Tables

3. Capturing 3D Views

- 3D Views
- 3D Views Tab
- · Capture 3D View
- Activating and Modifying 3D Views
- · Using 3D Views Options
- Publishing PMI
- Special 3D View Types
- Model Break View

4. 3D PDF Template Editor

- 3D PDF Template Editor
- Areas of the Template
- Text Types
- Other Template Aspects
- · Building a Custom Template
- · Saving and Storing Custom Templates
- Testing the Templates

5. Using DimXpert

- · What is DimXpert?
- DimXpert Settings
- DimXpert Block Settings
- · DimXpert Dimension Settings
- How DimXpert works
- Auto Dimension Scheme
- DimXpertManager
- · Show Tolerance Status
- Modifying DimXpert Annotations
- Combining Dimensions
- Creating Multiple Schemes
- Manual DimXpert Annotations
- Feature Selector Toolbar
- Using DimXpert Dimension Tools
- Unique DimXpert Options

6. MBD and Assembly Models

- · Assembly Models and MBD
- Assembly Level Dimensions
- · Optimizing Settings in Assemblies
- Adding Assembly Annotations
- BOM Tables and Balloons
- Publishing Assembly PMI
- · Additional MBD Tools

Course Objectives: At the end of each course, students will know the capabilities of the software and will be able to use the learned features.

Training Course: Training is given in class at SolidXperts or online where each student has access to a workstation or online product version.

Methodology: Training is based on case studies demonstrated by the instructor. At the end of each lesson, time will be given for exercises.

Competences Evaluation: During the classwork, the instructor will correct the exercises on-demand and explain the solutions to the entire class if needed.

Instructor: SolidXperts trainers are Certified SolidWorks Instructors (CSWI) and authorized by Emploi-Québec.

Course Materials: One or more training manuals are included with the training course.

Attestation: A certificate will be given to each student at the end of the course to attest to the successful completion of the requirements for the course.

WWW.SOLIDXPERTS.COM



SOLIDWORKS TolAnalyst - 1 day (7h)

*This training's duration is about half a day but we will complete it with personnalized coaching on your models or examples files.

**No books currently exist for the TolAnalyst course.

1. DimXpert

- DimXpert Overview
- · Auto Dimension Scheme
- Datums
- · Size Dimensions
- · Location Dimensions
- · Geometric Tolerances
- Tolerance Status
- · DimXpert Options
- Using DimXpert Information in Drawings
- Pattern Feature

2. TolAnalyst

- TolAnalyst Overview
- · Establishing the Measurement
- Assembly Sequence
- Assembly Constraints
- Analysing the Results
- Fixed/Floating Fasteners



SOLIDWORKS CAM Standard - 2 days (14h)

1. SOLIDWORKS CAM Basics and User Interface

- What is SOLIDWORKS CAM?
- SOLIDWORKS CAM User Interface
- · Process Overview
- SOLIDWORKS CAM Feature
- Tree Operation Plans
- Toolpaths

2. Automatic Feature Recognition (AFR) and Operation Modification

- Working with Features, Operations, and Toolpaths
- Automatic Feature Recognition
- · Feature Strategy
- Modifying Operations
- Modifying Parameters
- Design Changes

3. Interactive Feature Recognition (IFR)

- · Interactive Feature Creation
- 2.5 Axis Features
- Part Perimeter Feature
- Mill Part Setup
- · Work Coordinate Offsets
- Selection Filters

4. Interactive Operations

- Interactive 2.5 Axis Mill Operations
- Save Operation Plan

5. Merging Features and Operations

- Machining Similar Features
- Create Group
- Combine Operations
- Link Operations

6. Avoid and Contain Areas

Add Avoid and Contain Areas

7. Pattern Features and Mirror Toolpaths

- Patterning 160
- Mirror Toolpaths

8. Advanced Features and Operations

- Advanced Feature Creation
- · Engrave Feature
- · Curve Feature
- Multi-stepped Hole
- · Case Study: Multi-stepped Hole Machining
- Tap and Thread Mill Hole Operation
- Case Study: Tap and Thread Mill
- · Corner Round and Chamfer Machining
- Case Study: Corner Round and Chamfer Machining
- Multi Surface Feature
- · Case Study: Multi Surface Feature Creation

9. Customizing the Technology Database

- SOLIDWORKS CAM Technology Database (TechDB)
- User Defined Tool
- Mill Machine
- Mill Tool
- Tool Crib
- Strategies



SOLIDWORKS CAM Professional – 1 day (7h)

*The "SOLIDWORKS CAM Standard" training is required for this class.

**Since our clients generally use only 50% of the training's content, this course is shortened to 1 day and is adjusted with personnalized coaching based on your manufacturing process.

***If you want to get the whole course content, we can offer this class on a 2 days schedule. Please contact your account manager.

1. SOLIDWORKS CAM Configurations

- SOLIDWORKS CAM Product Review
- SOLIDWORKS CAM Configurations
- Working With CAM Configurations

2. High Speed Machining (VoluMill ™)

- VoluMill Overview
- · VoluMill Settings
- · VoluMill Technology Expert

3. Assembly Machining

- SOLIDWORKS CAM Assembly Mode
- Machine Setup
- Part Manager
- Stock Manager
- Assembly Machining Programming with Subroutines
- Machining Multiple Parts
- Import Part Data
- · Split Instance
- Split Setup

4. 3 Plus 2 Machining

- 3 Plus 2 Machining (Indexing)
- Indexing

5. Turning Basics

- SOLIDWORKS CAM Turning
- Process Overview
- Setup
- Chuck/Fixture
- Stock
- · Machinable Features
- New Turn Feature

6. Chucks, ID Features and Operations

- Section Method
- Double Chucking
- Modifying Feature and Operation Parameters
- · Editing toolpaths

7. Probing

· Introduction to Probing



Introduction to Visual Basic.net - 2 days (14h)

1. Introduction

2. The Basic Interface

3. Code

- Types of variables
- · Definition of variables
- The message box

4. Compilation

5. VB Tools

- Benchmarks
- Breakpoints
- Keyboard Shortcuts

6. Loops

- For...Next
- Do...Loop
- · Force output

7. If Statements

8. The Select Case Statement

9. The Interface of Your Programs

- Interface Language
- Activation checks
- · Other interface parameters

10. Posts

- Simple message
- Message to capture the response

11. Goto

12. Conventions

- · Variable names
- Method names
- Argument names

13. Variables List

- · The array
- La collection

14. The Timer Control

15. Operators

16. The Text File

- · Reading a text file
- Writing to a text file

17. File Manager

- · File operations
- Operations on files

18. Creating a Method

- Sub-type method
- The method of type function

19. Manipulate the Registry

· Management options in the registry

20. Windows

21. Operations on Text

- · Text comparison
- Conversion values
- Extracting a portion of text
- Extracting data from a file path
- Splitting text
- Replacement values



SOLIDWORKS API Fundamentals – 2 days (14h)

*The "Introduction to Visual Basic.net" training is required for this class.

1. Using the Macro Recorder

- Macro Recording
- Macro Toolbar
- Understanding How Macro Code Works
- Understanding How to Call Members on API interfaces
- · Passing Parameters
- Cleaning Up Code
- · Adding Forms to a Macro

2. The API Object Model

- SOLIDWORKS API Object Model
- Application Objects
- Connecting to New Documents
- · Connecting to Existing Documents

3. Setting System Options and Document Properties

- · User Preferences System Option
- User Preferences Document Properties
- Locating the Correct APIs and Enumeration Values
- User Preferences Tables for System Option, Document
- · Properties and Menu Items

4. Automating Part Design

Automation Tool for Parts

5. Assembly Automation

· Automation Tool for Assemblies

6. Drawing Automation

Automating Drawing Creation

7. Selection and Traversal Techniques

- Programming with a Selected Object
- · The SOLIDWORKS BREP Model
- · Body and Face Traversal
- Feature Manager Traversal

8. Adding Custom Properties and Attributes

- Custom Properties
- · Configurations with Custom Properties
- File Summary Information
- · Document Attributes
- · The Attribute Objects
- Face Attributes

9. The SOLIDWORKS API SDK

- The API SDK
- · Creating a VB.NET Add-In
- Creating a C# Add-in
- C++ Add-Ins
- · Choosing a Programming Language

10. Customizing the SOLIDWORKS User Interface

- Customizing the UI With VB.NET
- Understanding The Add-in Code
- Property Pages
- Property Page Groups and Controls
- · Removing Menus and Toolbars
- · Other Areas of Customization

11. Notification

- Notification
- Notification in VBA
- Simple Notification
- Using Notifications in .NET



DraftSight - 1 day (7h)

1. User Interface

- · Pointing Device DraftSight Window
- Title Bar Pull-Down Menu
- Toolbars Graphic Windows
- · Commande Line Status Bar
- · Shortcut Menus Dialog Boxes
- · Keyboard Options Help Menu

2. Creating a Simple Drawing

- New Line
- · Delete Command Rectangle
- · Circle -Drafting Settings
- · Arc Undo and Redo
- Polygon- Drawing Setup

3. Coordinates

- Coordinated System CCS Icon
- Inquiry Units
- Coordinate Entry Snap from Entity Snap
- Drawing Boundary

4. Modify Commands

- Selecting Entities
- · Move Command Copy Command
- · Offset Command Mirror Command
- · Rotate Command Scale Command
- Trim Command Extend Command

5. Properties and Layers Toolbars

- · Layer Control Activate Layer Command
- Color Control Command LineStyle Control Command
- · LineWeight Control Command
- Layers Manager Command
- Property Painter
- · Properties Command

6. Drawing Files

- New Save Open
- File Management File Utilities

7. Using Schematic Annotations

- · Point Point Format
- Mark Divisions PolyLine
- Explode Edit PolyLine
- · Blocks -Insert Block
- Clean ExportDrawing
- · Hatch Pattern
- · Stretch Change Length
- · Split Fillet- Chamfer
- · EntityGrips Egrip Settings

8. View Commands

- Dynamic Pan Dynamic Zoom
- Zoom Window Zoom Previous
- Zoom Options Rebuild
- Named Views Multiple ViewTiles

9. Text and Dimensions

- Simple Note Note
- Text Style Edit Annotation
- Find and Replace Spell Check
- Dimensions Dimensions Style
- Edit Dimension Location Edit Dimension Text
- Edit Dimension Properties

10. Drawing Output and Layout

- Drawing Layout View Tiles
- · Working with Viewports on Sheets Print





Power Surfacing - 1 day (7h)

1. Basic Operations

- · Basic Manipulations
- Extrude
- Insert Loops

2. Operations (Continued)

- Hard Line
- Define Boundary

3. SOLIDWORKS Body References

- Import References
- Constrain to...
- Auto Update All Constrains

4. Spatial Constrains

- Retain Offset Constrain
- Retain Ratio Constrain

5. Advanced Operations

- · Advanced Manipulations
- Thicken
- Symmetry