



**SOLIDWORKS**

**Automating  
Training**

**Course Outline**

**SOLID**  **PERTS**  
by solidxperience

***ENSURE YOUR SUCCESS IN 3D DESIGN WITH SOLIDWORKS***

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**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.

## DriveWorks Solo – 3 days (21h)

### 1. Lesson 1

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- Basic Setup
- Capturing your Models

### 2. Lesson 2

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- Project Designer

### 3. Lesson 3

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- Building Rules

### 4. Lesson 4

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- Improving your Project

### 5. Lesson 5

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- Static Replacement Files

### 6. Lesson 6

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- Tables

### 7. Lesson 7

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- Form Navigation

### 8. Lesson 8

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- Enhancing your Forms
- Dynamic Replacement Files

### 9. Lesson 9

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- Driving Custom Properties

### 10. Lesson 10

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- Documents

### 11. Lesson 11

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- Drawings

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## DriveWorks Administrator – 4 days (28h)

*\*This course is given using digital files only (no physical book is provided)(*

### 1. Lesson 1

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- Creating a Group and Capturing Models

### 2. Lesson 2

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- Building a user interface in DriveWorks Administrator

### 3. Lesson 3

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- Building Rules

### 4. Lesson 4

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- Running your Project

### 5. Lesson 5

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- File Name and Relative Path Rules

### 6. Lesson 6

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- Tables

### 7. Lesson 7

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- Form Navigation
- Form Templates
- Static and Dynamic Control Properties
- Advanced form controls

### 8. Lesson 8

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- Dynamic Replacement Files

### 9. Lesson 9

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- Data Management

### 10. Lesson 10

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- Documents

### 11. Lesson 11

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- Drawings

### 12. Lesson 12

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- Specification Flow
- Preparing your Models for Automation

### 13. Lesson 13 (Advanced)

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- Advanced Form Controls

### 13. Lesson 14 (Advanced)

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- Specification Control

### 13. Lesson 15 (Advanced)

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- Linking to Data

### 13. Lesson 16 (Advanced)

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- Rollup Data Tables

### 13. Lesson 17 (Advanced)

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- Hierarchical properties

### 13. Lesson 18 (Advanced)

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- Macro Buttons

### 13. Lesson 19 (Advanced)

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- Generation Tasks

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## SWOOD Design – Essential – 3 days (21h)

### 1. SWOOD Design Presentation

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- Introduction to SWOOD Design
- Configuring
- Integration of SWOOD into SOLIDWORKS
- User Interface

### 2. SWOOD Panel Creation

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- Creating a Panel
- Editing a Panel
- Curved Panels
- Other Methods of Creation

### 3. SWOOD Frame Creation

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- Demonstration of a SWOOD FRAME
- Creating a SWOOD Frame with a Panel
- Editing a Frame
- Adding Extra Parameters
- Creating a New Frame from an Existing Frame
- Finalising and Saving Frames to Library

### 4. SWOODBox Creation

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- Introduction to SWOODBoxes
- Intention and Principles when Creating a SWOODBox
- Presentation of SWOODBox Task Pane
- Demonstration of SWOODBox Insertion
- Creation and Saving a SWOODBox to Library
- SWOODBox Machining Definition
- Insertion of a SWOODBox
- Introduction to SWOODBox Scripts

### 5. SWOOD Connector Creation

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- Accessing Connectors Library
- Creating a Simple Connector
- Creating a Compound Connector
- Introduction to Rule Creation in Scripts
- Inserting a Connector

### 6. SWOOD Profiles

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- Creating a new Profile
- Applying created profile to Profile Library
- Applying a Profile to an Edge

### 7. Edge Bands

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- Applying an Edge Band to a Panel
- Creating a Machining Profile with Edge Band
- Applying an Edge Band with a Machining Profile

### 8. Materials

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- Creating a New Material
- Applying a Material (Panel, frame, click, and drag with or without driving thickness)
- Managing Materials
- Managing Materials through Panel Interface

### 9. Creating a Project with Multiple Frames

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- Project Creation
- Copying a Frame
- Modifying Dimensions of Frames
- Creating Layout Sketches
- Inserting Frames onto Layout Sketch
- Creating Magnetic Insertion Points
- Creating a Layout with Magnetic Mates
- Modifying Layout Sketch
- Generate a Report

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## SWOOD CAM – 2 days (14h)

*\*The "SWOOD Design - Essential" Training is required for this class.*

### 1. Integrating SWOOD CAM into SOLIDWORKS

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- Add-ins
- SWOOD Settings

### 2. SOLIDWORKS Settings for SWOOD CAM

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- Required Configuration
- Managing Views
- Complex Assemblies
- Customizing Command Bar
- Dynamic Highlight
- Custom Property Files

### 3. Tool Creation

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- Presentation of Tool Library
- Presentation of Aggregate Library
- Aggregate Properties
- Properties of Drill Bits
- Simple Tool Creation
- Modifying an Aggregate/Drill Block
- Blade Management

### 4. Program Settings and Automatic Operations

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- Configuring each Phase of a Part File
- Origin
- Tool Insertion
- Creating a Machining Definition (Automatic contour)
- Creating an Automatic Drilling Definition (without selection)
- Creating an Automatic Grooving Definition (without selection)
- Creating an Automatic Pocket Operation
- Creating an Automatic Sawing Operation

### 5. Manual Operations

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- Pocket Milling and Machine Pocket Milling
- Creating a Contour with Wall Selection
- Creating a Contour for Grooving/Rebating Operation
- Creating a Contouring Operation with a Chamfering Tool
- Demonstration of Tool Simulation
- Creating an Operation on a Sketch

### 6. 4 & 5 Axis Operations

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- Surfacing, Contouring and Sawing
- Guide Line for Inclined Plane
- Inclined Pocket Milling Operations
- Interpolate C-Axis
- Chamfering
- Creating a 5-Axis follow-up Operation in OP0
- Creating a 3D Roughing Operation (Roughing & Finishing)

### 7. SWOOD Design Panel Integration with SWOOD CAM Operations

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- Template Creation
- Creating a Frame with Machinings
- Creating a Partial Contouring Operation
- Positioning by Mates in Assembly Machining
- Positioning by Offsets in Assembly Machining
- Positioning by Repetition in Assembly Machining
- Transforming a Part into an Assembly

### 8. Link with SWOOD DESIGN

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- Profile Machining
- Calibrating with and without Edge Bands
- Stock Following Edge Bands and Laminate

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## SWOOD Advanced – 1 day (7h)

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### 1. Introduction to Script Programming

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- Organization of scripts
- Introduction to script programming
- Different levels of script application

### 2. Advanced SWOODBox

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- Advanced SwoodBox presentation
- Creation of the parameters of a SwoodBox
- Creation of the rules of a SwoodBox
- Automate a SwoodBox with a script

### 3. Using SWOODCenter

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- Library opening
- Simple element creation
- Compound element creation
- Introduction of rules with script
- Insertion of links

### 4. SWOOD Report

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- Data export

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