

SOLIDWORKS (CSWP-DT) Drawing Tools Certification Prep Course

Target Audience

This course is designed for SOLIDWORKS users who want to become Certified SOLIDWORKS Professional Advanced in Drawing Tools CSWP-DT. It is suitable for users who have basic knowledge of SOLIDWORKS and want to develop advanced drawing and documentation skills and achieve the CSWP Drawing Tools certification.

Course Outcomes

- Understand drawing creation and documentation workflows in SOLIDWORKS
- Apply dimensions, annotations, and detailing standards effectively
- Create and manage bill of materials and tables
- Generate advanced drawing views and modify drawings efficiently
- Optimize drawings using standards, templates, and performance tools
- Prepare for and successfully pass the CSWP Drawing Tools Certification exam

Course Objectives

- Develop structured knowledge of drawing tools and documentation techniques
- Build proficiency in creating and editing professional drawings
- Enable learners to work with advanced views, annotations, and BOMs
- Introduce drawing templates, sheet formats, and standardization practices
- Reinforce learning through hands-on exercises aligned with certification requirements
- Prepare participants comprehensively for the CSWP Drawing Tools certification exam

Course Outline

The course comprises **40-hours** of theory and labs and is divided into **13** different chapters. Each chapter will be followed by hands-on lab exercises to reinforce learning and gauge understanding of the topics covered.

Table of Contents

Chapter 1. Introduction to SOLIDWORKS

- Installing SOLIDWORKS
- Getting Started with SOLIDWORKS
- Invoking the Part Modeling Environment
- Invoking the Assembly Environment
- Invoking the Drawing Environment

- Identifying SOLIDWORKS Documents
- Customizing the Command Manager
- Working with Mouse Gestures
- Saving Documents
- Opening Existing Documents

Chapter 2. Sketching Fundamentals for Drawings

- Drawing a Line
- Drawing a Rectangle
- Drawing a Circle
- Drawing an Arc
- Drawing an Ellipse
- Trim
- Offset
- Convert Entities
- Sketch Relations
- Smart Dimension
- Fully Defined Sketch

Chapter 3. Drawing Basics

- Invoking the Drawing Environment
- Creating Drawing Sheets
- Sheet Formats and Templates
- Standard Drawing Views
- Model Views
- Projected Views
- Section Views
- View Palette and Model Views
- Beginning a New Drawing
- Drawing System Options

Chapter 4. Drawing Views and Advanced Views

- Auxiliary View
- Detail View
- Broken View
- Broken-out Section
- Crop View
- Alternate Position View
- Advanced Section Views
- Advanced Normal View
- Rotating Views
- Relative View
- 3D Drawing Views
- Custom View Orientations

Chapter 5. Dimensions and Annotations

- Applying Dimensions
- Model Items
- Smart Dimension
- Ordinate Dimensions
- Baseline Dimensions
- Annotations
- Notes
- Center Marks
- Centerlines
- Hole Callouts
- Surface Finish Symbols
- Driven and Driving Dimensions
- Arranging Dimensions
- Chain Dimensions
- Parametric Notes

Chapter 6. Bill of Materials BOM and Tables

- Creating Bill of Materials BOM
- Reordering BOM
- Editing BOM
- Custom Properties in BOM
- Linked Notes
- Balloons
- Tables in Drawings
- Bill of Materials Tables
- Filtering a BOM Table
- BOM Component Options
- Table Export Options

Chapter 7. Drawing Editing and Modification

- Hide/Show Components
- Layer Control
- View Display States
- Editing Drawing Views
- Updating Drawings
- Rebuilding Drawings
- Moving Drawing Views
- View Alignment
- Moving Dimensions
- Modifying Scale

Chapter 8. Drawing Standards and Detailing

- Dimension Standards
- Drawing Standards
- Annotation Standards
- Detailing Practices
- Drawing Layout
- Detailing Techniques
- Location Labels

Chapter 9. Mass Properties and Evaluation

- Mass Properties
- Density
- Volume
- Mass
- Center of Mass

Chapter 10. Drawing Templates and Sheet Formats

- Structure of a Drawing Document
- Drawing Document
- Drawing Sheet
- Sheet Properties
- Sheet Format
- Edit Sheet Format
- Understanding Drawing Templates
- Designing a Drawing Template
- Custom Sheet Format
- Title Block Fields
- Adding a Company Logo
- Defining Template Locations
- Save as Template

Chapter 11. Additional Tables and Tools

- Hole Table
- Revision Table
- Design Tables in Drawings
- Family Tables in Drawings
- Leader Annotation Options
- Markup
- Adding a Revision

Chapter 12. Additional Drawing Tools and Performance

- Reusing Drawings
- Replace Model
- Open with a New Reference
- Save As with References

- Pack and Go
- Compare Documents
- SOLIDWORKS Design Checker
- SOLIDWORKS Task Scheduler
- Updating Custom Properties
- Performance Evaluation
- Detailing Mode
- Lightweight Mode
- Opening Drawings with Missing References

Chapter 13. CSWPA Drawing Tools Exam Preparation

- Create Drawing from Part
- Create Drawing from Assembly
- Insert Standard Views
- Insert Projected Views
- Apply Dimensions
- Create BOM
- Modify BOM
- Apply Balloons
- Add Notes and Linked Notes
- Use Custom Properties
- Create Section Views
- Create Detail Views
- Create Broken Views
- Hide/Show Components
- Advanced View Manipulation
- Drawing Evaluation and Updates