



## SolidWorks Essentials: Parts, Assemblies & Drawings

Prerequisites	Length	Description
Mechanical design experience and knowledge of the Windows operating system.	5 Days	SolidWorks Essentials teaches students how to use the SolidWorks mechanical design automation software to build parametric models of parts and assemblies and how to make drawings of those parts and assemblies.

### SolidWorks Basics & The User Interface

- SolidWorks User Interface
- File References

### Introduction To Sketching

- Basic Sketching and Guidelines
- Sketch Relations and Dimensions

### Basic Part Modeling

- Design Intent
- Choosing the Best Profile and Sketch Plane
- Boss and Cut Features
- Using the Hole Wizard
- Filleting
- Design Library

### Modeling a Casting or Forging

- Design Intent
- Choosing the Best Profile and Sketch Plane
- Boss and Cut Features
- Using the Hole Wizard
- Filleting
- Design Library

### Patterning

- Reference Geometry
- Linear, Circular and Mirror Patterns
- Sketch Driven Patterns

### Revolved Features

- Revolved Features
- Material and Mass Properties

### Shelling & Ribs

- How to Shell a part and add Ribs
- Analyzing & Adding Draft
- Fillets and Thin Features

### Configurations

- Creating and Using Configurations
- Equations and Linking Values

### Editing

- Editing Concepts
- Repairing Sketch Issues
- Making Design Changes
- FilletXpert, DraftXpert, SimulationXpress

### Bottom-Up Assembly Modeling

- Bottom-Up Assembly Method
- Creating a New Assembly
- Position of the First Component
- FeatureManager Design Tree & Symbols
- Adding Components and Sub-Assemblies

### Using Assemblies

- Creating, Analyzing, Managing Assemblies
- Exploded Assemblies, Explode Line Sketch
- Using Part Configurations in Assemblies
- Creating Drawing Views of Assemblies

### Drawing Sheet Formats & Templates

- User Defined Properties in the Template
- Customizing a Sheet Format
- Defining the Title Block
- How to Update Sheet Formats

### Drawing Sheets & Views

- Model, Projected, Section, Detail and Broken View Creation and Settings
- Center-Mark & Centerlines
- Annotations
- Blocks

### Dimensions in Drawings

- Creating, Moving & Deleting Dimensions
- Dimension Properties

### Bill of Materials & Tables in Drawings

- Creating & Managing a Bill of Materials
- Design Tables in the Drawing

### DWG Support and eDrawings

