

Training

SolidWorks Essentials

Description SOLIDWORKS Essentials teaches you 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.

Prerequisites SolidWorks Essentials course, Mechanical Design experience, Windows OS experience

Duration 4 Days

Course Outline

Introduction	About This Course
Lesson 1	SOLIDWORKS Basics and the User Interface <ul style="list-style-type: none"> • What is the SOLIDWORKS Software? • Design Intent • File References • Opening Files • SOLIDWORKS User Interface • Using the Command Manager
Lesson 2	Introduction to Sketching <ul style="list-style-type: none"> • 2D Sketching • Stages in the Process • Saving Files • Sketching and Sketch Entities • Basic Sketching • Rules that Govern Sketches • Design Intent • Sketch Relations • Dimensions • Extrude • Sketching Guidelines
Lesson 3	Basic Part Modeling <ul style="list-style-type: none"> • Basic Modeling • Terminology • Choosing the Best Profile and Sketch Plane • Details of the Part • Boss Feature • Sketching on a Planar Surface • Cut Feature • View Selector • Using the Hole Wizard • Filletting • Editing Tools • Detailing Basics • Drawing Views • Center Marks

	<ul style="list-style-type: none"> • Dimensioning • Changing Parameters
Lesson 4	Symmetry and Draft <ul style="list-style-type: none"> • Design Intent • Boss Feature with Draft • Symmetry in the Sketch • Sketching Inside the Model • View Options • Using Model Edges in a Sketch • Creating Trimmed Sketch Geometry • Copy and Paste Features
Lesson 5	Patterning <ul style="list-style-type: none"> • Why use Patterns? • Linear Pattern • Circular Patterns • Reference geometry • Planes • Mirror Patterns • Using Pattern Seed Only • Up To Reference • Sketch Driven Patterns
Lesson 6	Revolved Features <ul style="list-style-type: none"> • Design Intent • Revolved Features • Edit Material • Mass Properties • File Properties • SOLIDWORKS SimulationXpress
Lesson 7	Shelling and Ribs <ul style="list-style-type: none"> • Shelling and Ribs • Analysing and Adding Draft • Other Options for Draft • Shelling • Ribs • Full Round Fillets • Thin Features
Lesson 8	Editing: Repairs <ul style="list-style-type: none"> • Part Editing • Editing Topics • Sketch Issues
Lesson 9	Editing: Design Changes <ul style="list-style-type: none"> • Part Editing • Design Changes • Information from a Model • Rebuilding Tools

	<ul style="list-style-type: none"> • Sketch Contours • Replace Sketch Entity
Lesson 10	Configurations <ul style="list-style-type: none"> • Using Configurations • Other Methods to Create Configurations • Modeling Strategies for Configurations • Editing Parts that have Configurations • Design library
Lesson 11	Global Variables and Equations <ul style="list-style-type: none"> • Using Global Variables and Equations • Renaming Features and Dimensions • Design Rules Using Global Variables and Equations • Using Operators and Functions
Lesson 12	Using Drawings <ul style="list-style-type: none"> • More About Making Drawings • Removed Section • Detail Views • Drawing Sheets and Sheet Formats • Model Views • Section View • Annotations
Lesson 13	Bottom-Up Assembly Modeling <ul style="list-style-type: none"> • Creating a new Assembly • Position of the First Component • FeatureManager Design Tree and Symbols • Adding Components • Mating Components • Using Part Configurations in Assemblies • Subassemblies • Smart Mates • Inserting Subassemblies • Pack and Go
Lesson 14	Using Assemblies <ul style="list-style-type: none"> • Analysing the Assembly • Checking for Clearances • Changing the values of Dimensions • Exploded Assemblies • Rollback and Reorder Explode Steps • Explode line Sketch • BOM • Assembly Drawings