



VIRTUAL TRAINING AND INTERNSHIP INTRODUCTION CAD & CAE

Day 1 (Introduction to SolidWorks)

- SolidWorks User Interface
- Navigation Shortcuts
- SolidWorks Templates
- Saving Renaming and managing files
- Measuring
- Customizing Interface

Day 2 (Getting Started with SolidWorks)

- Creating 3D part
- Building Assembly
- Making 2D drawing from Part/Assembly
- Basics of 3D modelling

Day 3 (Introduction to Part Modelling)

- Creating 2D Sketches
- Constraints and relationships
- Extruded Boss/Base feature
- Extruded cut feature
- Revolved base/boss feature
- Revolved Cut feature
- Materials, scenes, and appearances
- Evaluate feature (Mass properties)

Units and templates

Different types of dimensions

Day 4 (Sketch Tab)

Line tool

Rectangle tool

Circles and arc tool

Slot's tool

Ellipse and cones

Polygon tool

Creating text on parts

Using equations for sketching

Spline tool

Use of equations for drawing curve

Sketch ink

Day 5 (Modifying Sketches)

Trim tool

Offset tool

Moving entities

Undo, redo feature

Mirror feature

Linear and circular patterns

Convert entities tool

Fillets, chamfers

Day 6 (Reference Geometry)

Customized planes and axis

Coordinate system

Concept sketch

Markup view

Day 7 (Part Modifications)

Applying fillets and chamfers to part

Applying draft

Shell command

Mirror command for parts

Creating linear and circular patterns

Day 8 (Advanced part modelling)

Loft tool

Loft tool with guide curves

Lofted cuts

Swept cuts

Wrap command

Surface tool

Use of surface for part modelling

Move/copy bodies

Project curve

Day 9 (Advanced Part modelling)

Introduction to sheet metal

Introduction to weldments

Day 10 (Hole wizard and blocks)

Introduction to hole wizard

Types of holes

Using hole wizard
Use of sketch block
Creating sketch block
Designing with blocks

Day 11 (Assemblies)

Introduction to assembly
Move and rotate parts
Introduction to mates
Subassemblies in another assembly
Linear and circular patterns
Use of Toolbox library

Day 12 (Advanced assembly)

Component mates
Advanced mates
Path mate
Mechanical mates
Plane mates
Magnetic mates

Day 13 (Use of Design tables)

Introduction to design tables
Complex calculations
Component configurations
Assemblies with design table
Adding design table

Day 14 (Part Drawings)

Introduction to drawings
Drawing sheet properties
Selection of projection angle
Creating drawing from part

Day 15 (Dimensioning)

General dimensions
Ordinate dimensions
Holes and curved surfaces
Using auto dimension tools

Day 16 (Annotations)

Adding annotations
Special views
Custom properties
Use of design library
Use of equations

Day 17 (Assembly Drawing)

Assemblies to drawing
Adding bill of material
Adding balloons
Exploded view

Day 18 (Introduction to GD&T)

Introduction to Geometric Dimensioning and Tolerancing

Day 19 (Fluid flow simulations)

Introduction to CFD using SolidWorks

Day 20 (Fluid Flow simulations)

Project on CFD

Day 21 (Static Analysis)

Introduction To static analysis using SolidWorks

Day 22 (Static Analysis)

Stress, Strain Analysis

Factor of Safety

Day 23 (Design Optimization)

Project on Static Analysis

Day 24 (Design optimization)

Project on design optimization for additive manufacturing

Day 25 Project

Day 26 Project

Day 27 (Introduction to SolidWorks Visualize)

Introduction to renderings

Day 28 (SolidWorks Certifications)

All about SolidWorks Certifications