

MASTERING **SOLIDWORKS**



 SOLIDWORKS

DESIGN | ASSEMBLE | DRAFT

with Real-World ConfidenceDesign

ABOUT EXPERTISOR ACADEMY



Two college-broken minds. One big vision.

We saw the gap, education teaches but reality demands more. True mastery comes from learning directly from those who have done it, implemented it, and created real impact.

That is why we built Expertisor Academy, a platform where impact driven creators become mentors.

From a small idea to thousands of students impacted, we are now on a mission to build the world's biggest creator ecosystem and empower millions of learners with practical, real world education.

Our Philosophy: Top-quality education should be affordable and driven by value. Money is a by-product of creating real impact



INSTRUCTOR PROFILE

01



Elavarasan S

Mechanical Product Design Engineer

Fresh out of college in 2021, I couldn't crack Internships because I lacked real-world design skills. Every rejection pushed me to realize one thing: college theory wasn't enough for core mechanical jobs.

Instead of giving up, I started learning SolidWorks through industry projects. Slowly, I built a strong portfolio, worked on live projects across multiple domains, and discovered practical strategies to land high-pay mechanical design roles ,strategies no one teaches in the market.



Designed Industry-Ready Models



Proven Path to ₹7 LPA+ Career

✖ Rejections to Breakthroughs

Today, with 4+ years of industry experience and after mentoring hundreds of learners, I'm here to make sure you don't go through the same struggle.

Click & Watch the Class Intro Video



VIEW DEMO



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Course Overview

- Master SOLIDWORKS from scratch through real-world mechanical parts and assemblies — explained fully in Tamil.
- This course is built for mechanical students, diploma holders, and working professionals who want to learn how products are actually designed, documented, and made.
- From modeling a link arm , to assembling a screw jack or universal joint, you'll get the hands-on skills industry expects — including GD&T, drawing best practices, and portfolio-ready projects.

- Beginner-friendly
- Practice-focused
- Fully in Tamil
- Lifetime access + Certificate
- Active learner community

This course is designed for

Mechanical Engineering Students

- Looking to move beyond college theory and build real CAD and drafting skills that companies expect.

Diploma / ITI Graduates

- Who want to master SolidWorks and gain the confidence to apply for design jobs or start freelancing.

Working Professionals

- In production, maintenance, or quality roles — who want to shift into design or upgrade their CAD proficiency.

Fresher Job Seekers

- Struggling to land interviews or convert them into offers due to lack of a strong portfolio.

Aspiring Freelancers

- Wanting to offer 3D modeling, drafting, or mechanical design services online or locally.

Educators & Trainers

- Who want structured, real-world-based content to support their classroom or lab training.

Prerequisites

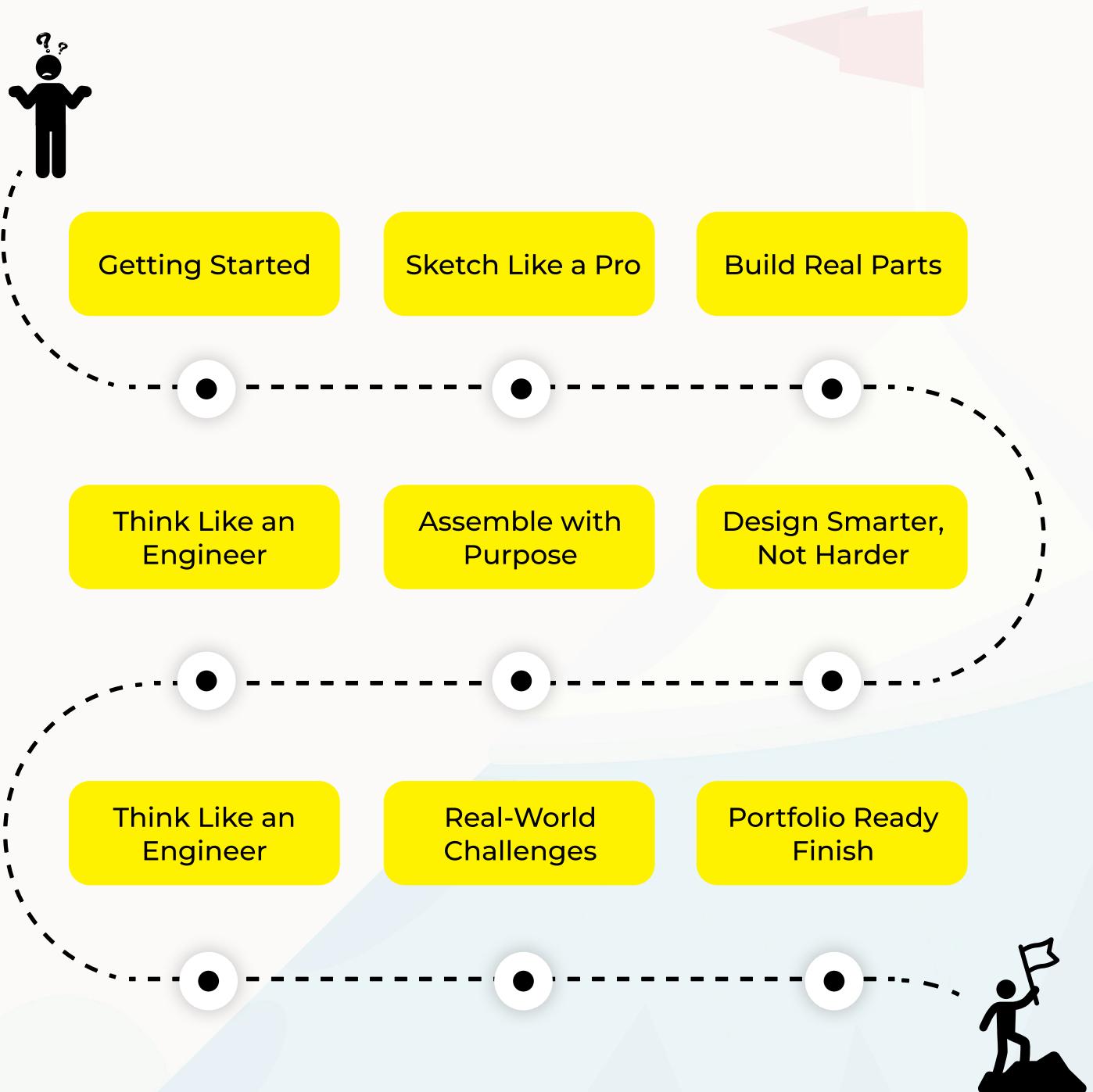
This course is designed to be accessible to anyone with a mechanical mindset. However, having the following will help you get the most out of it:

- Basic understanding of mechanical concepts (e.g., holes, shafts, levers, tolerances)
- Some exposure to engineering drawings is helpful — but not mandatory
- A strong willingness to learn by doing — this is a hands-on course
- A Windows laptop/PC capable of running SolidWorks smoothly

You do not need:

- Any prior CAD or SolidWorks experience
- Prior exposure to 3D modeling
- Advanced math or engineering design theory

Your Solid Works Growth Path



1. Getting Started

Set up your tools, explore the UI, and feel at home in SolidWorks from day one.



2. Sketch Like a Pro

Master 2D sketching tools — lines, arcs, mirrors — and build rock-solid foundations with constraints and clean intent.

3. Build Real Parts

Create functional mechanical parts using boss, cut, revolve, fillets, and more. 10 unique builds, each with real-world logic.

4. Design Smarter, Not Harder

Add ribs, shells, sweeps, and patterns. Learn the "why" behind every feature and create parts ready for assembly.

5. Assemble with Purpose

Learn how things come together — sub-assemblies, smart mates, and motion-ready mechanical builds.

6. Draft for the Shop Floor

Turn your 3D ideas into 2D drawings — sections, views, dimensions, and tolerances that manufacturers actually need.

7. Think Like an Engineer

Apply GD&T, create release-ready drawings, and understand what makes a design shop-approved.

8. Real-World Challenges

Tackle industry-style exercises — model manias, assembly setups, and BOM-driven drafting tasks.

9. Portfolio Ready Finish

Wrap it all into a clean, complete portfolio that speaks for your skills — from sketch to sheet.



COURSE SYLLABUS

06

PART MODELING MODULE

Total Duration: 5 hrs 20 mins

Practice Exercises: 1 hr 20 mins

Master the foundational SolidWorks tools to design real mechanical components like pistons, link arms, and crane hooks. Each part build includes a dedicated practice exercise for reinforcement.

Build 01 Link Arm

- Learn how to sketch with line, centerline, and mirror
- Use trim and fillet tools for clean sketch endings
- Create 3D geometry using Boss Extrude
- Understand basic sketch-to-part workflow

Build 02 Bearing Housing

- Create geometry with rectangle and circle
- Use Hole Wizard for standard holes
- Apply extruded cuts and mirror features
- Learn symmetric design techniques

Build 03 V-Belt Pulley

- Master Revolved Boss/Base & Cut features
- Create keyed shaft profiles
- Use centerlines for rotational symmetry



COURSE SYLLABUS

07

Build 04 Pipe Elbow

- Draw arcs and centerpoint arcs
- Apply mirror and fillet to pipe geometry
- Create swept boss/base in hollow parts

Build 05 Rib Support Block

- Add ribs for strength using Rib Feature
- Use draft and smart dimensions
- Practice clear, orthogonal sketching

Build 06 Collar (Fluency Practice)

- Use Boss Extrude and Shell
- Add chamfers and control draft angles
- Reinforce fluency with basic modeling features

Build 07 Exhaust Manifold

- Use Boss Extrude and Shell
- Add chamfers and control draft angles
- Reinforce fluency with basic modeling features

Build 08 Engine Piston

- Use Boss Extrude and Shell
- Add chamfers and control draft angles
- Reinforce fluency with basic modeling features



COURSE SYLLABUS

08

Build 09 Connecting Rod

- Create curves and apply fillet transitions
- Use mirror and pattern to complete part
- Explore cutting through revolved geometry

Build 10 Crane Hook

- Sketch using guide curves and sweep
- Use Thin Features to control hook profile
- Combine Lofted Boss/Base for final shape

ASSEMBLY MODULE

Total Duration: 5 hrs 2 mins

Learn how to combine components into working assemblies using mates, constraints, and motion logic. Practice with sub-assemblies and mechanical linkages.

Assembly 1 Universal Joint

- Use sub-assemblies and revolute mates
- Align rotating parts using cross-pins
- Build for rotational movement

Assembly 2 Manual Screw Jack

- Use concentric mates to align shafts
- Create exploded views and assembly stages
- Use of Mechanical mates & limit mates

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COURSE SYLLABUS

09

Assembly 3

Piston and Crank Mechanism

- Build crank-piston linkages
- Apply pin constraints for realistic motion
- Understand motion sequencing

Assembly 4

Gears Toolbox Setup

- Use Toolbox components for gears
- Align gear teeth using mates
- Understand gear contact and animation.

Assembly 5

Pipe Vise System

- Mate irregular parts for assembly
- Add housing and clamping sub-parts
- Create exploded view and BOM

DRAFTING & GD&T MODULE

Total Duration: 2 hrs 30 mins

Develop industry-ready 2D drawings directly from 3D parts and assemblies. Apply manufacturing symbols and standards to your documentation.

Drafting Module D1

Drawing Fundamentals

- Understand purpose of 2D drawings
- Walk through SolidWorks Drafting UI
- Add basic annotations and views

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COURSE SYLLABUS

10

Drafting Module D2

Bearing Housing Drawing

- Use projection views and dimensioning
- Apply section views
- Introduce tolerancing practices

Drafting Module D3

Mounting Block Drawing

- Create detailed section views
- Apply Tolerance in the views
- Document manufacturing dimensions

Drafting Module D4

Introduction to GD&T

- Learn GD&T basics and symbol application
- Define datums and control features
- Follow standard engineering drawing practices

Drafting Module D5

Assembly Drawing with BOM

- Create exploded views with balloons
- Insert and edit BOM tables
- Complete title block for shop floor use



COMPLETION & CERTIFICATION

11

Your Efforts, Officially Recognized!



Upon Successfully Completing the Program, Students Will Receive:

- INTERNSHIP LETTER** – Proof of hands-on experience from Virtua Technologies.
- COURSE COMPLETION CERTIFICATE** – Industry-recognized validation of your skills. This ensures stronger resumes, better job opportunities, and career credibility!



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CERTIFICATE

OF COMPLETION

PROUDLY AWARDED TO

Arun Kumar

for successfully Completing the SolidWorks Design Mastery Program and demonstrated proficiency in 3D modeling, part and assembly design, technical drawings, and simulation using SolidWorks.





Certificate ID
IBJ45632

Co-founder
P.C. Sathesh

Verify Certificate
<https://learn.expertisoracademy.in/verify-certificate>

Issued on
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HOW TO ENROL?

12

Step 01 Join Now & Complete Payment

- Click the "Join Now" button on our website.
- You'll be redirected to the Payment Page with secure options (UPI, Card, etc.).
- Once the payment is confirmed, you'll receive a confirmation

Step 02 Get Your Welcome Video

After successful payment, an email will be sent with:

- Program Overview Video (How to get started)
- Website & App Login Credentials
- Community Access Link (Exclusive Learning & Networking)

Step 03 Start Learning Instantly!

- Use your login details to access our website or mobile app.
- Start exploring your courses, live sessions, mentorship, and career guidance right away!

ENROL NOW

THANK YOU



Ready to Transform Your Career?

You're just one step away from unlocking an All-in-One Power-Packed Learning Experience!

JOIN NOW

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