CADTEK’S TRAINING

PASSPORT

Become a SolidWorks Expert

Our training passport is the perfect solution to achieving a high quality skillset and full competency in the SolidWorks software suite.

With one passport you can unlock access to 30 days of classroom based courses offering you a comprehensive training and development plan in one single purchase.

These passports allow you to make massive savings on training, compared to booking multiple courses one at a time.

INCLUDED COURSES:

- SolidWorks Essentials
- SolidWorks Drawings
- Advanced Assemblies
- Advanced Part Modelling
- Sheet Metal
- Weldments
- Advanced Surfacing
- Simulation Fundamentals
- SolidWorks Simulation
- Photo View 360
- SolidWorks Visualize Standard
- Mould Design
- Routing & Piping
- Electrical Routing
- Motion Simulation
MECHANICAL DESIGN COURSES
SolidWorks Essentials is the starting point for all of your SolidWorks training. It is a 4 day classroom based course designed to teach someone new to SolidWorks how to build parametric models of parts and assemblies, and how to make drawings of those parts and assemblies.

This course, focused entirely on the 2D drawings aspect of the package, goes in depth into setting up drawing sheets, creating drawing views, applying dimension schemes and generating bills of materials.

For CAD managers we work through an example of creating, customising and reusing drawing border information to enable your drawing sheets to contain dynamic place holders to model information. Also learn how to reuse drawing data, manage references correctly and check your work against a baseline standard.

A 2 day course covering various assembly specific topics. This course will teach you the most efficient ways to create assemblies along with techniques for optimising the performance of large assemblies.

Advanced Part Modeling teaches you how to use multibody solids, sweeping and lofting features, and the more advanced shaping capabilities of SolidWorks.

Surface Modeling teaches more advanced techniques used to build freeform shapes in SolidWorks.

PhotoView 360 covers the rendering of photo-realistic images. The course looks at appearances, decals, lighting effects, scenes and the technical challenges of creating complex visualisations of SolidWorks parts and assemblies.
SHEET METAL  
This course teaches you how to build sheet metal parts and produce the flattened manufacturing output. Building standalone sheet metal parts, converting parts to sheet metal, and modeling sheet metal parts in the context of an assembly are covered.

WELDMENTS  
Weldments teaches you the most efficient methods of creating welded structures with standard structural members. It also covers 3D Sketching which is the ideal starting point for a structure.

MOULD DESIGN  
Mould Design Using SolidWorks teaches you several manual mould creation techniques and how to use the mould Tools in SolidWorks.

ROUTING & PIPING  
A 2 day course which explains how to create, edit and manage Piping and Tubing routes in SolidWorks. It also covers customisation of the routing library, adding your own routing components and creation of drawings.

ELECTRICAL ROUTING  
The routing aspect of SolidWorks is available as a Premium add-in. Electrical routing allows you to complete your electrical circuits in a fast and accurate fashion. Discover the component libraries within SolidWorks and the ability to create parts lists and wiring diagrams for assembly and manufacture.

SOLIDWORKS ANIMATION  
This course focuses on the ability to create animations from your SolidWorks Parts and Assemblies. Topics include automated and manual methods of creating animations featuring camera views, changing appearances and controlling the motion of components, creating moving cameras, including points-of-view for walk-throughs as well as attaching cameras onto moving objects.
COMMUNICATION DESIGN COURSES
SOLIDWORKS COMPOSER 2 DAY COURSE

SolidWorks Composer enables you to create technical publications that stay parametric with your SolidWorks CAD designs. This means you can begin the creation of tech pubs in parallel with the CAD designs rather than afterwards to dramatically streamline your processes. Over two days, learn how to create high quality vector output images, animate assembly sequences and create fully interactive documents amongst many other commands.

SOLIDWORKS VISUALIZE 1 DAY COURSE

This course will teach key functionality within SolidWorks Visualize Standard (included with SolidWorks Professional) to attendees. The course content will begin with an introduction to the user interface and all of the necessary functionality to complete a basic render.

VISUALIZE PROFESSIONAL 1 DAY COURSE

This course will teach key functionality within SolidWorks Visualize Professional and follows on from the introductory content presented in the Visualize Standard training course. This course focusses solely on the advanced content within Visualize Professional covering topics such as configurations, animations, render queuing, VR (interactive 360deg rotations of models), and sun studies.

SOLIDWORKS INSPECTION 1 DAY COURSE

This course covers a new product offering in the portfolio which automated the means of capturing and inspection dimensions from drawing files, and non SolidWorks files such as PDFs and image files. You will learn how to create report templates and export the inspection reports into Excel for further analysis and formatting. We also will show you how to annotate your drawings and capture annotations such as balloons and symbols.

SOLIDWORKS MBD 1 DAY COURSE

SolidWorks Model Based Definition is a new product offering allowing you to produce drawing-less documentation adhering to PMI standards. Learn how to annotate your 3D models with dimension and tolerance information by capturing design features and then export the results into PDF templates for review.
SIMULATION FUNDAMENTALS 1 DAY COURSE

This one day course is designed for those less familiar with the broader concepts of stress analysis. It is an ideal preparation for the main SolidWorks Simulation course or would be beneficial to anyone wishing to use SolidWorks SimulationXpress. It will cover the basics of Finite Element Analysis, definitions, terminology and an explanation of the required material properties. This is a practical course which will use simple models and hand calculations to reinforce the content.

SOLIDWORKS SIMULATION 3 DAY COURSE

This 3 day course is designed to make SOLIDWORKS users productive more quickly with the SOLIDWORKS Simulation Software. It offers a comprehensive hands-on training on the application. This course will cover the entire analysis process from meshing to evaluation of results for parts and assemblies. The class discusses linear stress analysis, gap/contact analysis, and best practices.

SIMULATION PROFESSIONAL 2 DAY COURSE

Simulation Professional, an additional bolt on to SolidWorks, covers a range of additional tools for structural analysis. Investigate slender parts’ resistance to buckling, predict fatigue life of your designs and analyse thermal situations. Optimise your models to save money in your designs, investigate vibration in your components and understand how your parts react if dropped.

MOTION SIMULATION 2 DAY COURSE

Motion Simulation is a SolidWorks Premium add-in and allows you to calculate and test mechanisms built into your parts and assemblies through the animation controller. Using the animation interface of SolidWorks, Motion Simulation can accurately simulate motors and inter-part relationships with graphical outputs such as power usage and cam trace paths. Motion can also integrate with the mechanical simulation modules to show potential failure points in use.
SolidWorks Flow Simulation is used to analyse the flow and thermal affects within your designs. Determine the flow of liquids and gases internal and external of your assemblies to ensure maximum efficiency and understand whether thermal implications may cause a problem. Learn about the range of powerful animation outputs from the software that help visualise how design changes may improve your design.

You will learn how to use specialised simulation tools to predict how melted plastic flows during the injection moulding process. This in turn enables you to predict manufacturing defects such as weld lines, air traps, short shots, and sink marks to allow you to revise your designs. The SolidWorks Plastics course covers features and functions of both SolidWorks Plastics Professional (for part designers) and SolidWorks Plastics Premium (for mould designers).

In this Simulation module attendees learn about the effects that random vibration and dynamic loading conditions have on their designs. This module forms part of the SolidWorks Simulation Premium suite of products. Also understand how damping and excitation can impact the day to day use of components.

This Simulation module focuses on the three branches of non linear analysis: Material behaviour (such as plastics, rubbers and composites); Geometric conditions (large displacements); and Contact considerations. We will work through the material models that are considered using Non Linear analysis and predict buckling points, plastic deformation and metal forming in your designs.
ELECTRICAL DESIGN COURSES
The goal of the Electrical Schematics course is to teach you how to use SolidWorks Electrical to optimise your drawings and designs for manufacturability so you can maximise quality, avoid rework and decrease time to market. This course is focused on 2D Design.

SolidWorks Electrical is a recent addition to the product portfolio which allows integration between the electrical and mechanical design processes. The 3D element of the Electrical program allows users to import their wiring diagrams to automate the routing of electrical parts, wires and cables into their pre-existing SolidWorks assembly models.

This course builds on content taught into the standard Electrical Schematics and Intermediate modules delving into more advanced topics including: Managing data in SolidWorks Electrical, Importing Legacy Data, EPR Linking, Import and Export to MS Excel, Using Connectors, 3D Routing Analysis & Creating Report Queries.

SolidWorks Electrical is a recent addition to the product portfolio which allows integration between the electrical and mechanical design processes. This course shows how the electrical schematic data can be imported into SolidWorks to create fully working 3D models of cable and wire routes.

SolidWorks PCB teaches you all the basics of PCB design within the software, from schematic design and board layout to managing template/libraries and generating reports. This course also reviews the managed process of linking ECAD and MCAD teams using SolidWorks PCB.
MANUFACTURING DESIGN COURSES
We run SolidWorks certified manufacturing partner product training courses for SolidCAM, SWOOD and SigmaNEST. SolidCAM provides seamless single-window integration and full associativity with the SolidWorks design model - you never have to leave the SolidWorks window. SWOOD CAM manages NC machines dedicated to woodworking and their technologies. SigmaNEST allows manufacturers of all types and sizes to drive all major fabrication equipment with a single programming solution.

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<th>Course</th>
<th>Duration</th>
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<tr>
<td>SOLIDCAM CAD ESSENTIALS</td>
<td>2 DAY COURSE</td>
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<td>SOLIDCAM AFRM</td>
<td>1 DAY COURSE</td>
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<td>4 AXIS SIMULTANEOUS MACHINING</td>
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<td>5 AXIS SIMULTANEOUS MACHINING</td>
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<td>SOLIDCAM ADVANCED MILL-TURN</td>
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<td>SOLIDCAM I-MACHINING</td>
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<td>SOLIDCAM CAD 2.5D</td>
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<td>SOLIDCAM 3D HIGH SPEED MILLING</td>
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<td>SOLIDCAM HSS</td>
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<td>SOLIDCAM TURNING</td>
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<td>SWOOD DESIGN</td>
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<td>SIGMA NEST</td>
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TRAINING LOCATIONS
Across the UK

1. Durham
2. Leeds
3. Liverpool
4. Sheffield
5. Warrington
6. Furness Vale
7. Leamington Spa
8. Cambridge
9. Stokenchurch
10. Bristol
11. London
12. Kent
13. Exeter
14. Fareham