

Training Course Outlines

DESIGN.....

SolidWorks Essentials



4 day duration

The SolidWorks Essentials course is encouraged for anyone new to SolidWorks. Whether you have migrated from 2D CAD, another 3D system, or have no experience with CAD at all this course is suited for you. Starting from the very basics of the program, the course develops looking at modelling essentials required for day to day use of the software, right through to some advanced topics for automating designs. Over the 4 days the three modes of SolidWorks are introduced; Part and Assembly modelling and also the 2D drawing environment.

PREREQUISITES- As this is the first SolidWorks training course, the only prerequisites we advise are a) have experience navigating around the Windows Operating System and b) completing the "Getting Started" Tutorials- (Help > SolidWorks Tutorials)

SolidWorks Drawings



2 day duration

This course, focused entirely on the 2D drawings aspect of the package, goes in depth into setting up drawing sheets, creating drawing views and applying dimension schemes. Time is spent customising drawing borders for company specific requirements.

PREREQUISITES- Attendees are required to have taken the SolidWorks Essentials training course to ensure familiarity with the SolidWorks User Interface.

SolidWorks Advanced Part Modelling



2 Day Duration

A 2 day course covering 4 main topics related to advanced modelling techniques in SolidWorks. Learn about the multibody environment within SolidWorks, using Boolean operations and the master model technique. Delve deeper into the Sweep and Loft feature, looking in depth at the advanced options that are used to create organic and contoured shapes.

The course finishes off by looking at some of the lesser known SolidWorks features, including advanced filleting options, interactive model manipulation and freeform design.

The whole course also looks more in depth at advanced sketching tools and curve generation.

A must for consumer and product designers, as well as general SolidWorks users looking to gain a more rounded view of what the product is capable of from a complex shape point of view.

PREREQUISITES- This is a faster paced course and so the SolidWorks Essentials course must have been taken prior to attending. Ideally 4 weeks of regular use of the software will be ideal to provide a good foundation of learning the advanced techniques.

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SolidWorks Assembly Modelling



2 day duration

A 2 day course covering 8 assembly specific topics. Learn about designing “top down” within the context of an assembly, ideal for bespoke/ one off components. Speed up assembly generation with shortcuts and tips and tricks for standard parts and fixings.

The course also looks at automated assemblies with configurations, post assembly modifications, assembly animation, and an in depth look at assembly management.

This course is a must for customers that generate larger assemblies to understand how to reap benefits of large assembly performance and management, but also those who spend time working on repetitive tasks in their assemblies.

PREREQUISITES- This course needs an understanding of the software environment and also the basic software fundamentals, and so the SolidWorks Essentials course is a required prerequisite. For general best practice and assembly management, this course should hold a high priority within your training program.

SolidWorks Surface Modelling



2 day duration

The surface modelling course is ideal for consumer and product designers who have a requirement to create complex shapes and forms. This course introduces the concept of modelling with surfaces. The ability to mix and match between surfaces and solids is discussed in depth and a typical surface modelling workflow is one of the seven topics covered.

PREREQUISITES- Attendees should have attended the Advanced Part Modelling course as many of the commands are re-used and prior knowledge is expected.

SolidWorks Sheet Metal



1 day duration

The sheet metal functionality built into SolidWorks is a powerful aspect of the package that allows users to create the fully folded design and quickly generate the flattened form for manufacture.

Use specific sheet metal commands such as edge and miter flanges, hems and jogs as well looking at how standard SolidWorks models can be converted to sheet metal designs.

PREREQUISITES- This course builds on the basic methods and fundamentals taught in the SolidWorks Essentials course, and therefore the only required prerequisites is that the Essentials course has been taken.

SolidWorks Weldments



1 day duration

Using weldments in SolidWorks is a powerful means of creating fabricated structures within a single part environment. Use a vast library of standard profiles, weldments allows you to create complex structures from simple base sketches. Additional content of the course includes furniture design using weldments, 3D Sketching tips and stress analysis of beam structures.

PREREQUISITES- Attendees should have a good understanding of the SolidWorks fundamentals such as sketching and therefore should have attended the SolidWorks Essentials course.

Training Course Outlines

SolidWorks Mold Design

2 day duration

Mold tool design in SolidWorks allows you to generate the core and cavity models from your SolidWorks design. Account for draft angles, ejector pins and parting lines in your design to check the requirements for the tool design.



PREREQUISITES- Attendees need a good understanding of SolidWorks fundamentals and should have taken the SolidWorks Essentials course. There are also elements of surface modelling that are used and so this would also be a helpful, but not required, addition.

PhotoView 360

1 day duration

PhotoView 360 is a SolidWorks Professional add-on product replacing the PhotoWorks product in SolidWorks 2011. It allows users to generate photorealistic images from their SolidWorks 3D CAD files. Learn tips and tricks that can bring your images to life, lighting and material effects. Understand the appearance mapping capabilities to create fantastic marketing images showing your customers exactly what the final product will look like.



PREREQUISITES- Users should have a good understanding of the SolidWorks user interface and should have attended the SolidWorks Essentials training course.

SolidWorks Pipe Routing

2 day duration

The routing aspect of SolidWorks is available as a Premium add-in. Pipe routing covers the ability to create flexible and orthogonal links within your SolidWorks Assemblies. Learn how to generate rapid connections between key components and output as cut lists and assembly layout drawings.

Discover the libraries available in SolidWorks and also how to create your own standard route parts



PREREQUISITES- Users should have taken both the SolidWorks Essentials and Assembly Modelling courses.

SolidWorks Electrical Routing

2 day duration

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.



PREREQUISITES- Users should have taken both the SolidWorks Essentials and Assembly Modelling courses.

Training Course Outlines

SIMULATE.....

SolidWorks Simulation



3 day duration

The 3 day course covers a wide range of stress analysis topics for part and assembly linear analysis. The content of this course covers the software facilities offered in the SolidWorks Premium package, (more advanced Simulation Packages are covered in separate courses).

Understand the seamless integration between the SolidWorks and Simulation user interface, understand basics of FEA and how these are interpreted into solving real life engineering problems, inevitably reducing the required number of physical prototypes and testing.

The course gradually introduces more and more functionality of the package- understanding the meshing process, interpreting results and outputs, assembly contact and connector conditions. Learn how to speed up the analysis process of analysing structural behaviour of SolidWorks parts and assemblies, as per real life. This is a must for engineers who have a requirement to test their products under loading conditions.

PREREQUISITES- A basic understanding of SolidWorks commands and the user interface is needed, therefore the SolidWorks Essentials course is the only required prerequisite.

SolidWorks Motion



2 day duration

Motion Simulation is a SolidWorks Premium add-in and allows you to calculate and test mechanisms built into your parts and assemblies. 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.

PREREQUISITES-Users should have taken both the SolidWorks Essentials and Assembly Modelling courses.

Simulation Professional



1 day duration

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. Optimise your models to save money in your designs, investigate vibration in your components and understand how your parts react if dropped.

PREREQUISITES- Attendees should have good knowledge of FEA in SolidWorks and therefore should have already attended the SolidWorks Simulation training course

THIS COURSE IS NOT INCLUDED IN THE SOLIDWORKS TRAINING PASSPORT

Training Course Outlines

Simulation Premium- Dynamics



1 day duration

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

PREREQUISITES- Attendees should have good knowledge of FEA in SolidWorks and therefore should have already attended the SolidWorks Simulation training course.

THIS COURSE IS NOT INCLUDED IN THE SOLIDWORKS TRAINING PASSPORT

Simulation Premium- Non Linear



1 day duration

This Simulation module focuses on the three branches of non linear analysis: Non Linear Material behaviour (rubbers and composites), Non Linear Geometric conditions (large displacements) and Non Linear contact considerations.

PREREQUISITES- Attendees should have good knowledge of FEA in SolidWorks and therefore should have already attended the SolidWorks Simulation training course.

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SolidWorks Flow Simulation



2 day duration

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.

PREREQUISITES- Attendees should have completed the SolidWorks Essentials course.

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MANAGE.....

SolidWorks Workgroup PDM



1 day duration

SolidWorks Workgroup PDM is a SolidWorks Professional add-in product and is used for secure data management of your CAD and associated data. This course shows you how to use the common commands used within the PDM system such as checking in and out documents. Discover how PDM alerts you to the status of documents and learn how to query and search your data. Administration of the PDM system is NOT covered on this course.

PREREQUISITES- Attendees need some basic understanding of the SolidWorks User Interface. As only a limited amount of SolidWorks commands are covered, attendees should have at least used SolidWorks before to navigate around the user interface easily.

SolidWorks Enterprise PDM



2 day duration

SolidWorks Enterprise PDM can be used company wide as a document management system for SolidWorks CAD data as well as any other internal documentation. Learn about workflows, project structuring, variable mapping and template creation which would then be applied to configure the behind the scenes set up of the EPDM system. This course is structured towards the administration side of the software rather than the front end use- although an overview of this is discussed.

PREREQUISITES- This course is designed for the intended administrators. A sound knowledge of the Windows explorer environment is needed and a basic knowledge of the SolidWorks user interface is useful but not a requirement.

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PUBLISH.....

3D Via Composer



2 day duration

3D Via 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.

PREREQUISITES- Prior experience of SolidWorks would be beneficial but not necessary as 3D Via Composer runs as a standalone application to SolidWorks and hence has its own user interface.

THIS COURSE IS NOT INCLUDED IN THE SOLIDWORKS TRAINING PASSPORT