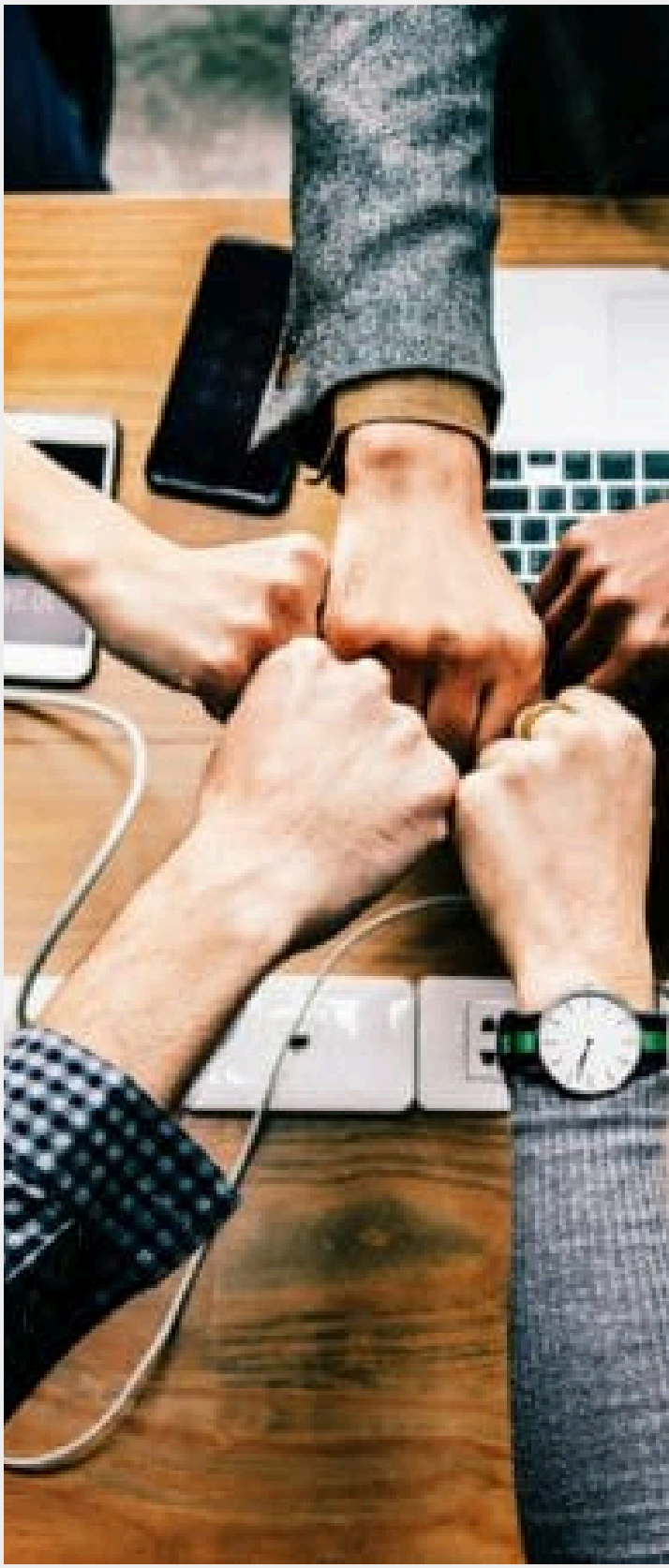
PLM RESOURCES GMBH

TRAINING CATALOG



SIMCENTERSTARCCM+

INTRODUCTION

PLM RESSOURCES GMBH IS A COMPANY THAT BASES ITS FOUNDATIONS ON THE CONTRIBUTION OF ADDED VALUES TO ITS CUSTOMERS, HELPING THEM FOCUS ON ALL OF THEIR INTERNAL PROCESSES IN ORDER TO CONCENTRATE ON THE CONTINUOUS IMPROVEMENT OF THEIR PRODUCTS.

PLM RESOURCES, OFFICIAL PARTNER OF SIEMENS DIGITAL INDUSTRIES SOFTWARE IN NORTH AFRICA, AIMS TO OFFER A VARIETY OF SOFTWARES IN DIFFERENT AREAS SUCH AS TECNOMATIX, TEAMCENTER, SIMCENTER, NX AND SOLID EDGE.

SIMCENTERSTARCCM+

Simcenter helps predict critical system performance The Simcenter range uniquely combines 1D simulation, 3D CAE and testing to enable you to proactively predict the critical performance of all systems across the full product lifecycle. By combining physical simulations and insights from data analysis, Simcenter enables you to optimize, design and deliver innovative products faster and more reliably.

Fundamentals of Simcenter STAR-CCM+

ID : PLM-2023-FSSCCM
Duration: 3 days
Prerequisites: No prerequisites required
Overview : serving as an introduction to our Enterprise-Wide software solution, the aim of the class is to equip the attendee with a firm understanding of the basic use of Simcenter STAR□CCM+ for conducting multi-physics simulations. Attendees will experience a gradual well-structured learning curve over a three day period that reflects the major processes developed in Simcenter STAR-CCM+.
Each day we aim to have attendees using the software, hands-on, to begin their own simulations after instruction through tutorials and lectures. Using this structured approach, attendees will leave the training ready to address common numerical engineering challenges using Simcenter STAR□CCM+ comfortable in the knowledge that Siemens engineering support will be available to provide on-going technical support.

BATTERY SIMULATION MODULE

ID : PLM-023-BSM

Duration: 1 day

Prerequisites: No prerequisites required

Overview: The goal of this training is to provide you with the background knowledge and skills to perform a thermal analysis of lithium-ion batteries using Battery Simulation Module.

USER-DEFINED BATTERY SIMULATION IN SIMCENTER STAR□CCM

ID : PLM-20-UDBSSSCC

Duration: 2 days

Prerequisites: No prerequisites required Overview :Battery simulation allows the user to simulate thermal effects in batteries and their effect on the surrounding flow. This course introduces user-defined batteries. It covers the setup workflow, terminology, and physics. Guidance for the names of CAD parts for a successful mapping of battery cells is given. A pouch cell is used in all exercises to explain the concepts and general Simcenter STAR-CCM+ capabilities.

Battery cells and connectors are imported and setup in a series of 3. A single automated mesh operation is used to mesh parts individually. The three battery cells in series are placed in a casing. Two battery modules are set up to run independently in the same sim file. They are cooled using different materials

ANALYZING AND POST PROCESSING DATA IN SIMCENTER STAR-CCM+

ID:PLM-23-APPDSSCCM

Duration: 1 day

Prerequisites: No prerequisites required Overview: Master your data analysis tasks! Starting with an intro to understanding your graphics resources, we will walk through the essential considerations for effective Scientific Visualization, focusing on the use of color, transparency and lighting to create high impact illustrations of your work. We will also address data management challenges and describe how and when to use the Solution History approach and/or the Simcenter STAR-CCM+ Viewer.

CLEANING CAD USING THE 3D-CAD PARAMETRIC MODELER IN SIMCENTER STAR-CCM+

ID : PLM-201-CAD3DPMSSCCM
Duration: 1 day
Prerequisites: No prerequisites required
Overview: The aim of this course is to prepare you to use features in Simcenter STAR-CCM+ to clean, modify, and prepare imported CAD geometries for CAE simulations. This includes diagnosing CAD errors and repairing them with geometry repair tools. In addition, you will gain skills needed to efficiently reduce and expand geometries for effective meshing and parametric modeling in Simcenter STAR-CCM+. Presentations, demonstrations, and practice labs provide you with multiple opportunities to learn and apply the knowledge and skills needed to confidently prepare CAD for CAE simulations**.**

BASIC SIMCENTER STAR-CCM+

ID : PLM-23-BSSCCM
Duration: 2 days
Prerequisites: No prerequisites required
Overview : Serving as an introduction to our Enterprise-Wide software solution, the aim of the class is to equip the attendee with a firm understanding of the basic use of Simcenter STAR□CCM+ for conducting multi-physics simulations. Attendees will experience a gradual well-structured learning curve over a two day period that reflects the major processes developed in Simcenter STAR-CCM+. At the second day we aim to have attendees using the software, hands-on, to begin their own simulations after instruction through tutorials and lectures. Using this structured approach, attendees will leave the training ready to address common numerical engineering challenges using Simcenter STAR-CCM+ comfortable in the knowledge that Siemens PLM engineering support will be available to provide ongoing technical support.

DATA ANALYSIS AND POST PROCESSING

ID : PLM-223-DAPP
Duration: 1 day
Prerequisites: No prerequisites required
Overview: Master your data analysis tasks! Starting with an intro to understanding your graphics resources, we will walk through the essential considerations for effective Scientific Visualization, focusing on the use of color, transparency and lighting to create high impact illustrations of your work. We will also address data management challenges and describe how and when to use the Solution History approach .

EULERIAN MULTIPHASE MODELING IN SIMCENTER STAR-CCM+

ID : PLM-323-EMMSSCCM
Duration: 2 days
Prerequisites: No prerequisites required
Overview: After an introduction in general multiphase modeling approaches in CFD (Computational Fluid Dynamics), we present the various models available in Simcenter STAR CCM+ to model multiphase flows. The focus of this course is then on the Eulerian Multiphase (EMP) model with its various options to model phase interactions. Starting with mono-dispersed flows in an areated mixing vessel we expand the application to flows with particles / bubbles of various sizes and finally, add dissolution mass transfer to the mix. Leaving flows restricted to only particles behind, we dip into flows with large scale interfaces. All concepts are discussed in presentations and practiced in labs. Some of the labs have detailed instructions, others invite the user to solve tasks to solidify the skills learned in the lessons.

MESHING BEST PRACTICES

ID : PLM-293-MBP
Duration: 2 days
Prerequisites: No prerequisites required
Overview : The purpose of this course is to help users better understand the meshing workflow in STAR-CCM+, what to avoid, and how to take advantage of the meshing capabilities of the software. This course will help participants become familiar with the Meshing approach through lectures and workshops that focus on key meshing features of the software. Participants will learn and practice the application of surface preparation tools, surface and volume meshers, 2.5 meshers, and the prism layer mesher.

In order to help users enhance the quality of their meshes, special attention is paid in this course to features of the Prism Layer mesher including the influence of meshing values and Prism Layer options on the mesh generated in near-wall areas.

SIMCENTER STAR-CCM+ FUNDAMENTALS

ID : PLM-2023-SSCCMF
Duration: 1 day
Prerequisites: No prerequisites required
Overview: Serving as an introduction to our Enterprise-Wide software solution, the aim of the class is to equip the attendee with a firm understanding of the basic use of STAR-CCM+ for conducting multi-physics simulations. Attendees will experience a gradual well-structured learning curve over a three day period that reflects the major processes developed in STAR-CCM+.
Each day we aim to have attendees using the software, hands-on, to begin their own simulations after instruction through tutorials and lectures. Using this structured approach, attendees will leave the training ready to address common numerical engineering challenges using STAR-CCM+ comfortable in the knowledge that Siemens engineering support will be available to provide on-going technical support.

This is a public classroom training offered at our training center in Nuremberg (over 3 consecutive days), as well as online training (over 5 consecutive morning sessions). Where / in which format it's given, you can see in our ClassFinder under location.
The training can be attended using 12 "Simcenter Training Credits" [TR-SCS-TOK] or 2400 "Learning Services Credits" [DE-LS-CDTS] per attendee. Diese Schulung wird in deutscher Sprache gehalten. Die Kursbegleitunterlagen sind in englischer Sprache. Sie wird in unserem Schulungszentrum in Nürnberg (3 Tage von morgens bis Abends) oder als Online Schulung (verteilt auf 5 Vormittage) angeboten. In welchem Format sie zum jeweiligen Termin angeboten wird, können Sie in unserem ClassFinder unter Veranstaltungsort bzw. Location sehen.

BASIC STAR-CCM+

ID : PLM-2023-BSCCM
Duration: 3days
Prerequisites: No prerequisites required
Overview : Serving as an introduction to our Enterprise-Wide software solution, the aim of the class is to equip the attendee with a firm understanding of the basic use of STAR-CCM+ for conducting multi-physics simulations. Attendees will experience a gradual well-structured learning curve over a three day period that reflects the major processes developed in STAR-CCM+. Each day we aim to have attendees using the software, hands-on, to begin their own simulations after instruction through tutorials and lectures. Using this structured approach, attendees will leave the training ready to address common numerical engineering challenges using STAR-CCM+ comfortable in the knowledge that Siemens PLM engineering support will be available to provide on-going technical support..

SELECTIVE CATALYTIC REDUCTION SIMULATION IN SIMCENTER STAR-CCM+

ID : PLM-253-SCRSSSCCM
Duration: 1 day
Prerequisites: No prerequisites required
Overview : Selective Catalytic Reduction (SCR) systems are used to meet regulations for Nitric Oxide emissions of Diesel Engines. This technology has become very promising in automotive industry and designing efficient SCR systems is one of the important tasks for CAE teams today. The objective of the Selective catalytic reduction simulation course is to provide analysis engineers with the ability to set up and run SCR simulations in Simcenter STAR-CCM+.