

Certified SolidWorks Motion Simulation – 2 Days

Description	This course will teach you how to use the SolidWorks Motion simulation package to study the kinematics and dynamic behaviour of your SolidWorks assembly models. The course has been designed for new SolidWorks Motion users who would like to learn to perform motion analysis on their designs. It provides an in-depth session on the basics of building, simulating and refining a mechanical design system.
Prerequisites	Certified SolidWorks Essentials – Part & Assembly Modelling

<p>Introduction What is SolidWorks Motion Understanding Basics Basics of Mechanism Setup in SolidWorks Motion Summary</p> <p>Lesson 1: Introduction to Motion Simulation and Forces Objectives Basic Motion Analysis Case Study: Car Jack Analysis Forces Results</p> <p>Lesson 2: Building a Motion Model and post processing Objectives Creating Local Mates Case Study: Crank Slider Analysis Mates Local Mates Power Plotting Kinematic Results Summary</p> <p>Lesson 3: Introduction to Contacts, Springs and Dampers Objectives Contact and Friction Case Study: Catapult Contact Contact Groups Contact Friction Translational Spring Translational damper Post-processing Analysis with friction (Optional) Summary</p>	<p>Lesson 4: Advanced Contact Objectives Contact Forces Case Study: Latching Assembly STEP Function Contact: Solid Bodies Geometrical Description of Contacts Instability Points Modifying Result Plots Precise Contact Integrators Summary</p> <p>Lesson 5: Curve to Curve Contact Objectives Contact Forces Case Study: Geneva Mechanism Curve to Curve Contact Solid Bodies vs. Curve to Curve Contact Solid Bodies Contact Solution Summary</p> <p>Lesson 6: CAM Synthesis Objectives CAMs Case Study: CAM Synthesis Trace Path Exporting Trace Path Curves</p> <p>Lesson 7: Flexible Joints Objectives Flexible Joints Case Study: System with Rigid Joints System with Flexible Joints Summary References</p> <p>Lesson 8: Redundancies Objectives Redundancies Case Study: Door Hinges How to Check for Redundancies Typical Redundant Mechanisms Summary</p>	<p>Lesson 9: Export to FEA Objectives Exporting Results Case Study: Drive Shaft Export of Loads Direct Solution in SolidWorks Motion Summary</p> <p>Lesson 10: Event Based Simulation Objectives Event Based Simulation Case Study: Sorting Device Servo Motors Sensors Task Summary</p> <p>Lesson 11: Design project (optional) Objectives Design Project Case Study: Surgical Shear – Part 1 Self-Guided Problem – Part 1 Self-Guided Problem – Part 2 Problem Solution - Part 1 Creating the Force Function Force Expression Case Study: Surgical Shear – Part 2 Summary</p> <p>Appendix A: Motion Study Convergence Solutions and Advanced Options Convergence Accuracy Integrator Settings Conclusion</p> <p>Appendix B: Mate Friction</p>
--	--	--