

SolidWorks Simulation Professional – 1 day

Description	This 1 day course will provide an in-depth coverage on the advanced topics in Finite Element Analysis (FEA) including heat transfer analysis, frequency analysis, fatigue, stability analysis based on the linear buckling concepts, 2D simulations (plane stress, strain and axis symmetry) and pressure vessel modulus. Example of parts and assemblies including those with various gap/contact conditions are reviewed.
Prerequisites	Certified SolidWorks Simulation

<p>Introduction What is SolidWorks Simulation? Limitations of SolidWorks Simulation Professional</p> <p>Lesson 1: Frequency Analysis of Parts Modal Analysis Basics Case Study: The Tuning Fork Frequency Analysis With Supports Frequency Analysis Without Supports Frequency Analysis with Load</p> <p>Lesson 2: Frequency Analysis of Assemblies Case Study: The Engine Mount All Bonded Contact Conditions Bonded and Free Contact Conditions</p> <p>Lesson 3: Buckling Analysis Buckling Analysis Case Study: Particle Separator</p> <p>Lesson 4: Thermal Analysis Thermal Analysis Basics Case Study: Microchip Assembly Steady-State Thermal Analysis Transient Thermal Analysis Transient Analysis with Time Varying Load Transient Thermal Analysis using a Thermostat</p>	<p>Lesson 5: Thermal Analysis with Radiation Case Study: Spot Light Assembly Project Description Steady State Analysis Full Radiation Conditions</p> <p>Lesson 6: Advanced Thermal Stress, 2D Simplification 2D Simulations - plane stress, plane strain, axis symmetry Thermal Stress Analysis Case Study: Thermal Expansion Joint Thermal Analysis Thermal Stress Analysis</p> <p>Lesson 7: Fatigue Analysis Fatigue Stress-life (S-N) Based Fatigue Case Study: Pressure Vessel Thermal Stress Study Fatigue Terminology Fatigue Study Fatigue Study with Dead Load</p> <p>Lesson 8: Advanced Fatigue Analysis Case Study: Suspension Fatigue Study</p>	<p>Lesson 9: Drop Test Analysis Drop Test Analysis Case Study: Camera Rigid Floor Drop Test Elastic Floor Drop Test Elasto-Plastic Material Model Drop Test with Contact</p> <p>Lesson 10: Optimization Analysis Optimization Analysis Case Study: Press Frame Static and Frequency Analyses Optimization Analysis Design Study</p> <p>Lesson 11: Pressure Vessel Analysis Case Study: Pressure Vessel Pressure Vessel Analysis Manhole Nozzle Flange and Cover</p>
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