

SolidWorks Simulation Professional Training Course

Description: This 4-day course is designed to make SolidWorks users productive more quickly with the SolidWorks Simulation Professional analysis package. The training class provides an in-depth coverage on the basics of Finite Element Analysis (FEA), covering the entire process from meshing to evaluation of results for parts and assemblies. It discusses linear stress analysis, heat transfer analysis, frequency analysis, stability analysis based on linear buckling concepts, and pressure vessel modulus. Examples of parts and assemblies including those with various gap/contact conditions are reviewed.

Length: 4 Days

Prerequisites: SolidWorks Essentials Plus Training & SolidWorks Simulation Training Courses

Topics Covered:

- FEA and CAD modeling approaches
- Boundary Conditions
- Loads
- Elements
- Linear vs non-linear analysis
- Preprocessing
- Analysis set up, Results visualization and post-processing
- Meshing options
- Mixed Meshing options
- Adaptive Meshing
- Loads and Restraints
- Small vs. Large displacement
- Linear static analysis of parts
- Gaps/Contact and Advanced Assembly Analysis
- Assemblies with special connectors and bolts
- Frequency Analysis
- Effect of In-plane loading on thin-walled structures
- Linear Buckling Analysis
- Heat Transfer: Conduction, Convection and Radiation
- Thermal Stress Analysis with contacts
- Drop Test
- Optimization
- Fatigue analysis (S-N curves, single/multiple invent formulations)
- Pressure vessel modulus