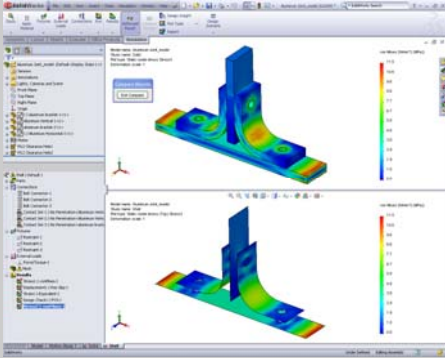


SolidWorks: Simulation 2010



OVERVIEW

This course is designed to make SolidWorks users productive more quickly with the SolidWorks Simulation Bundle. This course will provide an in-depth coverage on the basics of Finite Element Analysis (FEA), covering the entire analysis process from meshing to evaluation of results for parts and assemblies. The class discusses linear stress analysis, gap/contact analysis, and best practices.

TOPICS COVERED

Introduction to FEA

What is SolidWorks Simulation?
What Is Finite Element Analysis

Lesson 1: The Analysis Process

The Analysis Process
SolidWorks Simulation Options
Preprocessing, Meshing, Post-processing
Multiple Studies, Reports

Lesson 2: Mesh Controls, Stress Concentrations and Boundary Conditions

Mesh Control, Fillet, Bracket
Understanding the Effect of Boundary Conditions

Lesson 3: Assembly Analysis with Contacts

Contact and Gap Analysis
Pliers with Local Contact

Lesson 4: Symmetrical and Free Self-Equilibrating Assemblies

Shrink Fit Parts
Analysis with Soft springs

Lesson 5: Assembly Analysis with Connectors

Connecting Components, Connectors

Lesson 6: Compatible/Incompatible Meshes

Compatible / Incompatible Meshing
Bonded and No Penetration contact

Lesson 7: Assembly Analysis Mesh Refinement

Mesh Control in an Assembly
Draft Quality Coarse Mesh Analysis
High Quality Mesh Analysis

Lesson 8: Analysis of Thin Components

Thin Components
Mesh with Solid Elements
Refined Solid Mesh
Solid vs. Shell
Creating Shell Elements
Results Comparison

Lesson 9: Mixed Meshing Shells & Solids

Mixed Meshing Solids and Shells

Lesson 10: Mixed Meshing Solids, Beams & Shells

Mixed Meshing

Lesson 11: Design Scenarios

Design Scenarios
Multiple Load Cases
Geometry Modification

Lesson 12: Thermal Stress Analysis

Thermal Stress Analysis
Examining Results in Local Coordinate Systems
Saving Model in its Deformed Shape

Lesson 13: Adaptive Meshing

Adaptive Meshing
h-Adaptivity Study
p-Adaptivity Study

Lesson 14: Large Displacement Analysis

Small vs. Large Displacement Analysis
Small Displacement Linear Analysis
Large Displacement Nonlinear Analysis

Prerequisites:

Mechanical design experience;
SolidWorks experience

Logistics:

Length: 3 days
Time: 9:00 am—5:00 pm
Price: \$1,995.00



Authorized
Training,
Testing &
Support
Center

address 7508 Highway 107
Sherwood, AR 72120
main (501) 835-6868
fax (501) 835-8710
email training@secanttech.com

