⅔S SOLIDWORKS Simulation Premium Dynamics

OVERVIEW

CLASSROOM LENGTH: 2 days / **INSTRUCTOR-LED ONLINE LENGTH:** 3 days

PREREQUISITES: Must have attended the basic SOLIDWORKS Simulation Professional class, or have similar experience with SOLIDWORKS and working basic knowledge of finite elements, basic mechanical principles and basic principles in Vibrations.

DESCRIPTION: This course is targeted for the users who would like to become productive in analyzing structures subjected to various types of dynamic loading. The material covered includes time- dependent analysis (force loads as well as motion shock loading examples), harmonic analysis and random vibration analysis (MILS-STD-810F example is included), response spectrum analysis, and introduction to nonlinear dynamics simulation.

LESSON 1:
VIBRATION OF A PIPE

- Static Analysis
- Frequency Analysis
- Dynamic Analysis(Slow Force)
- Dynamic Analysis (Fast Force)

LESSON 2:
TRANSIENT SHOCK ANALYSIS ACCORDING TO MILS-STD-810H

- Mass Participation Factor
- Cumulative Mass Participation Factor
- Damping
- Viscous Damping
- Time Step
- Model with Remote Mass

LESSON 3:
HARMONIC ANALYSIS OF A BRACKET

- Harmonic Analysis Basics
- Single DOF Oscillator
- Harmonic Study Properties

LESSON 4:
RESPONSE SPECTRUM ANALYSIS

- Response Spectrum
- Response Spectrum Analysis Procedure
- Response Spectrum Input
- Mode Combination Method

LESSON 5:
RANDOM VIBRATION ANALYSIS ACCORDING TO MIL-STD-810G

- Distributed Mass
- Random Vibration Analysis
- Power Spectral Density Function
- Overall Level of Acceleration PSD
- Decibels
- Random Study Properties
- RMS Results
- PSD Results

LESSON 6:
RANDOM VIBRATION FATIGUE

- Material Properties, S-N Curve
- Random Vibration Fatigue Options

LESSON 7:
NONLINEAR DYNAMIC ANALYSIS OF AN ELECTRONIC ENCLOSURE

- Linear Dynamic Analysis
- Rayleigh Damping
- Time Integration Methods
- Iterative Methods

goengineer
www.goengineer.com

SOLIDWORKS SALES
info@goengineer.com
888.688.3234

TECHNICAL SUPPORT
support@goengineer.com
888.559.6167