



SIEMENS SOLID EDGE SIMULATION STANDARD TRAINING

Objectives

This training course introduces trainee to learn the principal of Finite Element Analysis using Solid Edge Simulation. The trainee also will learn how to solve engineering problems and some of the common tasks as examples. After completing this course trainee will be able to:

- ✓ Use Solid Edge Simulation for daily working process.
- ✓ Understand the types of FEA analysis
- ✓ Analysis a model by creating the studies, preparing the geometry, creating the loads, functions, constraints and meshes
- ✓ Review analysis results
- ✓ Modify and reuse analysis study

Pre-requisites

- ✓ This training is designed for Solid Edge user. It is recommended that user have a basic knowledge of Solid Edge.

Duration

2-day

Training Programme Day 1

Chapter	Topic	Duration	Time
Chapter 1	Introduction <ul style="list-style-type: none">• Describe the Solid Edge Simulation user interface.	0.5-Hour	09.00 AM - 09.30 AM
Chapter 2	Analysis Types <ul style="list-style-type: none">• Linear static analysis• Modal frequency analysis• Linear buckling analysis	0.5-Hour	09.30 AM – 10.00 AM

Chapter	Topic	Duration	Time
Chapter 3	Studies <ul style="list-style-type: none"> • Creating and using studies • Using Materials in studies • Modifying studies 	0.5-Hour	10.00 AM - 10.30 AM
Chapter 4	Geometry <ul style="list-style-type: none"> • Selecting geometry for studies • Selecting surface geometry for studies • Selecting occurrences for studies • Preparing and selecting united bodies for studies 	0.5-Hour	10.30 AM – 11.00 AM
Chapter 5	Loads <ul style="list-style-type: none"> • Creating and using loads • Define a load • Loads command bar • Structural and body loads • Load labels and symbols • Thermal loads • Thermal Load Options dialog box • Radiation Load Options dialog box 	1-Hour	11.00 AM – 12.00 PM
Chapter 6	Functions <ul style="list-style-type: none"> • Using functions • Use a function as variable input to loads 	1-Hour	12.00 PM – 01.00 PM
Chapter 7	Constraints <ul style="list-style-type: none"> • Creating and using constraints • Constraints • Define a constraint • Constraints command bar 	0.5-Hour	02.00 AM – 02.30 PM
Chapter 8	Meshes <ul style="list-style-type: none"> • Meshes • Mesh sizing • Examining the mesh • Identifying areas of poor mesh quality • Mesh the model 	0.5-Hour	02.30 PM – 03.00 PM
Chapter 9	Assembly Connectors <ul style="list-style-type: none"> • Target and source connector regions • Assembly connector handles, labels, and symbols • Glue and no penetration contact connectors • Thermal connectors • Create connectors based on assembly relationships 	1-Hour	03.00 PM – 04.00 PM

	<ul style="list-style-type: none"> • Create assembly connectors using the Auto command • Create manual connections between faces or surfaces • Replace target and source connection regions • Change connector region direction 		
Chapter 10	Beams and Frames <ul style="list-style-type: none"> • Define a node • Define a release • Display a beam cross section 	1-Hour	04.00 PM - 05.00 PM

Training Programme Day 2

Chapter	Topic	Duration	Time
Chapter 11	Review Analysis Results <ul style="list-style-type: none"> • Node data • Plots • Colors • Model display • Animations • Analysis reports 	1-Hour	09.00 AM - 10.00 AM
Chapter 12	Modify and Reuse Analysis Studies <ul style="list-style-type: none"> • Activate a study • Convert a synchronous study to ordered • Change the study material or thickness • Suppress individual loads to compare results • Edit the study processing parameters • Copy and paste studies or individual simulation objects • Add or remove study geometry • Add result plots to the study • Modify FEA symbol properties • Rename a study 	1-Hour	10.00 AM – 11.00 AM
Chapter 13	Linear Static <ul style="list-style-type: none"> • Simulate forces for I-Beams • Simulate pressures in a tank • Simulate torque on a mower hub 	2-Hour	11.00 AM – 01.00 PM

Chapter	Topic	Duration	Time
Chapter 14	Linear Buckling Analysis <ul style="list-style-type: none">• Simulate Linear Buckling Analysis• Review analysis results• Animate simulation results	2-Hour	02.00 PM – 04.00 PM
Chapter 15	Normal Modes Analysis <ul style="list-style-type: none">• Simulate Normal Modes Analysis• Review analysis results	1-Hour	04.00 AM – 05.00 PM