

Linear Static and Linear Dynamic Analysis with Simcenter Simlab

OEM: Siemens • Code: ILT110063

COURSE DESCRIPTION

This live training covers linear structural analysis using Simcenter Simlab software for modeling and Simcenter Optistruct software as the solver.

AUDIENCE PROFILE

- This course is designed for users with little or no prior experience in simulation modeling. It is ideal for students, career changers, or professionals looking to expand their skills in finite element analysis.

PREREQUISITES

- Getting Started with Simcenter Simlab (WEBNA27)
- Meshing for Structural Analysis with Simcenter Simlab (ILT110064)
- A computer with internet access and the installation of the latest version of Simcenter Simlab and appropriate license
- General knowledge of Simcenter Simlab recommended

COURSE OBJECTIVES

By the end of this course, participants will be able to:

- This section doesn't contain any content.

COURSE OUTLINE

Module 1: Day 1

- Linear Static Analysis
- Understanding the basics of system modeling and idealization, including linear vs. nonlinear and static vs. dynamic analysis types
- Assigning element types, materials, loads, boundary conditions, and rigid body definitions
- Performing static simulations, including mesh quality checks, solver settings, result evaluation, and thermo-structural coupling
- Modifying geometry and replacing components to manage design iterations within the simulation workflow

Module 2: Day 2

- Linear Dynamic Analysis
- Mesh Quality Check for linear analysis
- Understanding the basics of Dynamic System Modeling
- Vibration analysis: Modal Analysis, Pre-stressed Modal Analysis, Frequency Response, Damping
- Performing modal transient and random response simulations to evaluate structural behavior under time-varying or stochastic loads