

Learning Module

Linear Dynamics with Abaqus

This course introduces the user to the algorithms and methods used to study linear dynamic problems with Abaqus/Standard.

Objectives

Upon Completion Of This Course You Will Be Able To:

- Extract eigenmodes about a certain frequency.
- Determine whether the number of extracted eigenmodes is sufficient to represent the structure's response adequately.
- Perform transient, steady-state, response spectrum and random response analyses using the eigenmodes.
- Use multiple base motions.
- Apply damping in linear problems.

Knowledge Prerequisites

This course is recommended for engineers with experience using Abaqus.

Brands

Simulia

Available Releases

SIMULIA 2021, SIMULIA 2020, SIMULIA 2019, SIMULIA 2018, SIMULIA 2017, SIMULIA 2016, SIMULIA V6.14, SIMULIA V6.13, SIMULIA V6.12

Duration

16 hours

Discipline

Advanced Abaqus

Language(s) for selected release

English

Contents

Overview - Linear Dynamics with Abaqus

1- Introduction to Linear Dynamics in Abaqus

2 - Mode Based Solutions

3 - Extracting Real Eigenvalues

4 - Damping

5 - Base Motion Excitation

6 - Modal Transient Dynamics

7 - Response Spectrum Analysis

8 - Steady-State Dynamics

9 - Complex Eigenvalue Analysis

10 - Introduction to Random Response

A1 - Introduction to Nonlinear Dynamics

A2-Nonlinear Dynamics Abaqus Usage

A3 - Nonlinear Dynamics Examples