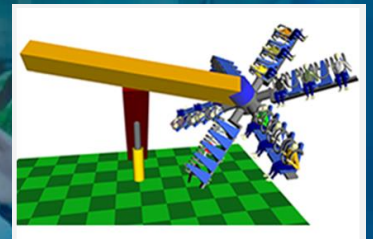


INTRODUCTION TO SIMPACK

SIMULIA COURSE DESCRIPTION



Level: Fundamental

Products: Simpack

Disciplines: Motion & Multibody System

Audience

- Simulation analysts and design engineers
- Multibody simulation experts with no previous experience of Simpack

Why take this course?

SIMULIA Simpack is a general multibody system simulation (MBS) software enabling analysts and engineers to simulate the nonlinear motion of any mechanical or mechatronic system. It is particularly well-suited for high frequency transient analyses, even into the acoustic range. SIMULIA Simpack was primarily developed to handle complex non-linear models with flexible bodies and harsh shock contact. This course explains the basics of multibody model set-up, simulation and postprocessing within the SIMULIA Simpack environment and provides a look at best practices and underlying theory to build a base for more advanced Simpack applications.

What will you learn?

Upon completion of this course you will be able to:

- Build multibody models in Simpack
- Start the most important Simpack solvers
- Postprocess the results
- Parameterize models in an efficient way
- Set up modular models using Simpack's substructuring concept

Explore Your Learning Options

Live Sessions	Engage in Real-Time, interactive group workshops guided by experts. Learn and collaborate live in your preferred language and time zone.	Join a live session
On-Demand Learning	Access expert-designed courses anytime, anywhere. Perfect for independent learners looking to build skills on their schedule.	Start Learning Now
Private Training	Exclusive, tailor-made sessions designed to meet your team's unique goals with expert guidance.	Contact Us for Custom Training



Gain hands-on experience and master real-world workflows through guided, practical training sessions.

Model and analyze the dynamic behavior of multibody systems for accurate motion and vibration predictions.

– SIMULIA Training Expert Team

What You Need to Know Before Starting

Some familiarity with fundamental multibody concepts

Agenda for Virtual Live Sessions

Participate in hands-on, real-time workshops where you'll gain practical expertise. Here's what you'll cover:

[Join an Instructor Led Session](#)

Day 1

Lesson 1: Overview of Simpack
Lesson 2: Building Blocks of Multibody Simulation
Lesson 3: Simpack User Interface
Workshop 1: Double Pendulum
Lesson 4: Equations and How They Are Solved
Lesson 5: Simpack Solvers
Workshop 2: Slider-Link Mechanism
Workshop 3: Connections
Lesson 6: Time Integration and Solver Settings
Workshop 4: Offline Solving
Lesson 7: Postprocessing with Simpack Post
Workshop 5: Double Pendulum Postprocessing
Lesson 8: Force Elements
Workshop 6: Two-mass Oscillator Setup
Workshop 7: Two-mass Oscillator Simulations

Day 2

Lesson 9: Excitations
Workshop 8: Sweep Excitation
Lesson 10: Useful Tools
Lesson 11: Advanced Force Elements
Workshop 9: Swaying Platform with Bumpstop
Lesson 12: Simpack Post Advanced Functionality
Lesson 13: Parameterization and External Data
Lesson 14: Substructuring
Workshop 10: Multi-Pendulum with Substructures
Workshop 11: Wind Turbine Communicators
Workshop 12: Poseidon Amusement Ride
Lesson 15: Command Line and Scripting (Optional)
Workshop 13: Pre Scripting First Steps (Optional)

Additional Material

Appendix 1: Joints and Constraints
Appendix 2: State Dependency
Workshop 14: Slider-Link Mechanism
Workshop 15: Four-Bar Link Mechanism
Workshop 16: Slider-Crank Mechanism

Want to Learn More?

Expand your knowledge by exploring our [course Catalog](#) and browsing learning paths on [Eduspace](#), our dedicated e-learning platform.

Join the Community!

[Join the SIMULIA community](#) to connect, learn, and stay updated.



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