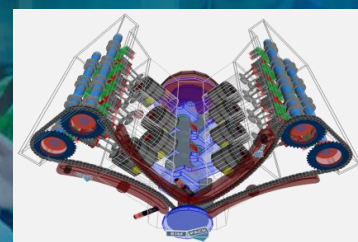


SIMPACK ENGINE

SIMULIA COURSE DESCRIPTION



Level: Advanced
Products: Simpack
Disciplines: Motion & Multibody System

Audience
 Simpack users planning to build up and analyze engine models in Simpack

Why take this course?

This course explains how to use Simpack specific modeling elements for engine applications. These include cranktrain modeling, the Dynamic Spring Generation tool, hydraulic lash adjuster, valvetrain, chain drive systems and Simpack Wizard together with the Engine demo database.

What will you learn?

Upon completion of this course you will be able to:

- Understand Simpack engine applications
- Use Simpack's specific modeling elements for engine applications

The course covers the following topics:

- Overview of engine applications in Simpack
- Cranktrain modeling

- Hydraulic lash adjuster
- Dynamic spring generation tool
- Kinematic and dynamic analysis of single valvetrain models
- Chain drive analysis
- Simpack Engine demo database

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

Before undertaking this course, you should have completed the Introduction to Simpack training course

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: Engine Assembly Overview
Lesson 2: Cranktrain Assembly
Workshop 1a: Torsional Analysis
Workshop 1b: Cranktrain Assembly
Workshop 1c: Piston Liner
Lesson 3: Hydraulic Lash Adjuster
Workshop 2a: Dynamic Hysteresis
Workshop 2b: Static Leakdown Test
Lesson 4: Dynamic Spring
Workshop 3: Dynamic Spring
Lesson 5: Valvetrain
Workshop 4a: Kinematic Analysis of a Single Valvetrain Model
Workshop 4b: Dynamic Analysis of a Single Valvetrain Model

Day 2

Workshop 4c: 3D Contact Valvetrain Dynamics
Lesson 6: Timing Mechanism
Workshop 5a: Chain Drive Layout
Workshop 5b: Flexible Chain Guide
Workshop 5c: Chain Drive Run-up Analysis
Workshop 6: Belt Drive
Lesson 7: Engine Demo Wizard Database
Workshop 7: Simpack Engine Demo Wizard Database – Substructure Handling
Lesson 8: Simpack Wizard
Workshop 8: Simpack Wizard

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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