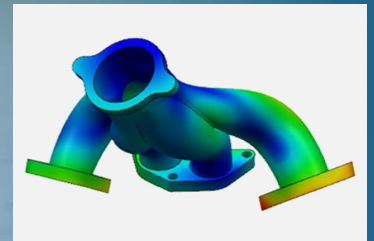


MECHANICAL SCENARIO CREATION ESSENTIALS

SIMULIA COURSE DESCRIPTION



Level: Fundamental
Products: 3DEXPERIENCE
Disciplines: Structures

Audience
This course is intended for the following roles:
· Structural Mechanics Engineer
· Structural Analysis Engineer

Why take this course?

This course is an introduction to structural and thermal simulation with the Mechanical Scenario Creation app on the 3DEXPERIENCE platform. It teaches you how to solve both linear and nonlinear static and dynamics problems (including implicit dynamics and explicit dynamics procedures).

What will you learn?

Upon completion of this course, you will be able to:

- Perform structural simulations (linear and nonlinear; statics and dynamics)
- Perform thermal simulations
- View and evaluate simulation results

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.

Run simulations collaboratively within the 3DEXPERIENCE platform, connecting design, data, and analysis seamlessly.

– SIMULIA Training Expert Team

What You Need to Know Before Starting

The following course is required prior to taking this one:

· Mechanical Scenario Creation Essentials

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: Getting Started with Simulation

Workshop 1: Buckle Clip Insertion

Lesson 2: Steps and Static Simulations

Workshop 2: Creep of a Pipe Intersection

Lesson 3: Loads, Boundary Conditions and Initial Conditions

Workshop 3a: Analysis of a Reinforced Panel

Workshop 3b: Cantilever Beam with Multiple Load Cases

Lesson 4: Interactions

Workshop 4: Pump Model – Steps, Loads, and Contact

Lesson 5: Running Simulations and Postprocessing

Workshop 5a: Nonlinear Static Analysis of a Pump Assembly

Workshop 5b: Threaded Connector Analysis (optional)

Day 2

Lesson 6: Dynamic Simulations

Workshop 6: Vibrating Cantilevered Plate

Lesson 7: Nonlinear Dynamics

Workshop 7: Pipe Whip Simulation

Lesson 8: Quasi-static Simulations

Workshop 8a: Channel Forming

Workshop 8b: Bending of a Thin Tube

Lesson 9: Heat Transfer Simulation

Workshop 9: Thermal Simulation of a Pump Housing

Additional Material

Appendix 1: Element Selection Criteria

Appendix 2: Cloud-based Simulation Roles

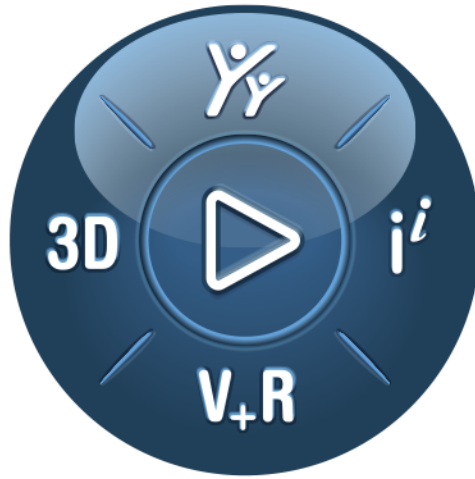
Appendix 3: Contact Pairs

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.



3DEXPERIENCE®

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