

## SIMULIA Structural Scenario Creation Essentials

Course Code	SIM-en-EMCS_F
Brand & Release	<b>3DEXPERIENCE®</b> R2018x
Duration	1 day
Level	Fundamentals
Prerequisites	SIMULIA <b>3DEXPERIENCE</b> Structural Model Creation Essentials course. Simulation analysts and engineers who will perform primarily static analysis in the <b>3DEXPERIENCE</b> platform will benefit from attending this class.

### Objectives:

This course is an introduction to structural and thermal simulation in the **3DEXPERIENCE** platform. It teaches you how to solve both linear and nonlinear static problems and basic linear dynamics problems.

### Class Structure:

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

The course covers the following topics:

- Linear and nonlinear structural analysis
- Loads and restraints
- Modeling contact
- Static analysis
- Natural frequency extraction
- Transient modal dynamics
- Harmonic response
- Heat transfer and thermal stress

The course is intended for the following Roles:

- Structural Analysis Engineer
- Steel Ship Structural Analysis Engineer

### Class Lessons:

Lesson 1: Getting Started with Simulation Scenarios

Lesson 2: Steps and Static Simulations

Lesson 3: Loads, Restraints and Initial Conditions

Lesson 4: Contact

Lesson 5: Running Simulations and Postprocessing

Lesson 6: Dynamic Simulations

Lesson 7: Heat Transfer Simulation (optional)