



*Hands On, Measurable
Training Programs*

Modeling Contact with Abaqus/Standard

Course Code	EDU-SIMULIA 2020-CONT_A
Brand & Release	SIMULIA 2020
Duration	2 days
Level	Advanced
Prerequisites	This course is recommended for simulation analysts or engineers with experience using Abaqus/ Standard.

Objectives:

Participants are given a brief overview of the contact formulation and contact logic used in Abaqus/Standard. The hands-on workshops provide ample opportunity to use the concepts developed in the lectures and to learn how to postprocess the results of a contact analysis.

Class Structure:

Understanding the interaction between bodies is essential for solving many engineering problems. Manufacturing processes, gears, bearings, seals and dynamic impact events all involve contact.

Upon completion of this course you will be able to:

- Define general contact and contact pairs
- Define appropriate surfaces (rigid or deformable)
- Model frictional contact
- Model large sliding between deformable bodies
- Analyze dynamic impact problems
- Resolve overclosures in interference fit problems
- Avoid overconstraining the model
- Avoid rigid body motions and unstable motions
- Use pre-tension sections to simulate assembly loads

Class Lessons:

Lesson 1: Introducing Modeling Contact with Abaqus/Standard

Lesson 2: Contact Workflow

Lesson 3: Surface-based Contact

Lesson 4: Contact Logic and Diagnostic Tools

Lesson 5: Contact Properties

Lesson 6: Interference Fits

Lesson 7: Additional Features

Lesson 8: Modeling Tips