

Learning Module

Analysis of Geotechnical Problems with Abaqus

Participants are given an overview of modeling geotechnical problems. Experimental testing and how it relates to the calibration of constitutive models for geotechnical materials is reviewed. The seminar teaches users how to use and calibrate the different geotechnical material constitutive models available in Abaqus and discusses the limitations of these models. The coupling between fluid flow and stress/deformation in the analysis of porous media is also considered. Modeling issues related to geotechnical problems are addressed and numerous illustrative examples are examined.

Objectives

Upon Completion Of This Course You Will Be Able To:

- An overview of modeling geotechnical problems.
- Experimental testing and how it relates to the calibration of constitutive models for geotechnical materials.
- How to use and calibrate the different geotechnical material constitutive models available in Abaqus.
- The limitations of these models.
- The coupling between fluid flow and stress/deformation in the analysis of porous media.
- Modeling issues related to geotechnical problems.

Knowledge Prerequisites

None

Language(s) for selected release

English

Contents

Overview - Analysis of Geotechnical Problems with Abaqus

- 1 - Introduction
- 2 - Physical Testing
- 3 - Constitutive Models (Part 1)
- 4 - Constitutive Models (Part 2)
- 5 - Analysis of Porous Media
- 6 - Modeling Aspects
 - A1 - Stress Equilibrium and Fluid Continuity Equations
 - A2 - Bibliography of Geotechnical Example Problems
 - A3 - Infinite Domains
 - A4 - Hydraulic Fracture

Brands

Simulia

Available Releases

SIMULIA 2021, SIMULIA 2020, SIMULIA 2019, SIMULIA 2018, SIMULIA 2017, SIMULIA 2016, SIMULIA V6.14, SIMULIA V6.13, SIMULIA V6.12

Duration

16 hours

Discipline

Advanced Abaqus