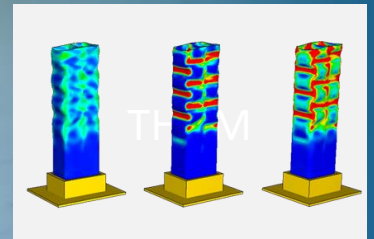


METAL INELASTICITY IN ABAQUS

SIMULIA COURSE DESCRIPTION



Level: Advanced
Products: Abaqus
Disciplines: Structures

Audience
 This course is recommended for simulation analysts whose work involves evaluating the inelastic response of metals.

Why take this course?

Properly modeling the inelastic behavior of materials is very important when evaluating the performance of a design in critical loading situations. This course provides a brief overview of the inelastic behavior observed in metals and the basic concepts of plasticity theory. The course shows Abaqus users how to model various forms of metal plasticity using a combination of examples and workshops to demonstrate the material models and the type of experimental data necessary to calibrate them. The assumptions and limitations of the various plasticity and creep models are also discussed.

What will you learn?

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

- Metals that show inelastic work hardening
- The Bauschinger effect
- "Ratcheting" and relaxation of the mean stress under cyclic loading
- Strain-rate-dependent inelastic behavior
- Temperature-dependent plasticity
- Heat generated by plastic deformation
- Ductile failure of metallic materials
- Plastic behavior in brittle (cast iron) metals
- Creep behavior in metals

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.

Apply nonlinear analysis techniques to simulate complex structural and multiphysics problems accurately.

– SIMULIA Training Expert Team

What You Need to Know Before Starting

Introduction to Abaqus or equivalent and experience using Abaqus.

Want to Learn More?

Expand your knowledge by exploring our [course Catalog](#) and browsing learning paths on [Eduspace](#), our dedicated e-learning platform.

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