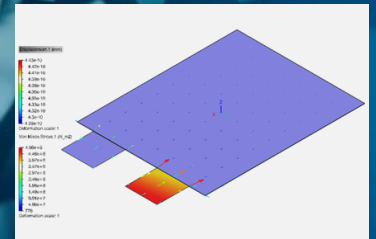


THERMAL-ELECTROCHEMICAL-STRESS SIMULATION OF LI-ION BATTERIES

SIMULIA COURSE DESCRIPTION



Level: Advanced
Products: 3DEXPERIENCE; Abaqus
Disciplines: Structures; Thermal

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

Why take this course?

This course introduces cell-level multiscale, multiphysics analysis of the electrochemical performance of Li-ion batteries based on porous electrode theory. The thermal effects from various losses (associated with the ionic diffusion, electrical conduction, entropy change and intercalation) and the mechanical effects due to lithiation-induced swelling are considered in a fully coupled manner.

What will you learn?

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

- Define material properties for Li-ion batteries
- Perform battery electrochemical analyses
- Define contact and constraints
- Postprocess Li-ion battery analyses

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:

- Structural Simulation Essentials (or its equivalent)

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.



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