

Simcenter Nastran 2019.2

Multi-Step Nonlinear with Solutions 401 and 402 with Femap for pre/post

Course Code **NAS401-401**

User Level **Advanced**

Language **English**

Price **\$3,300.00 (USD)** (Price may not include taxes applicable to your billing region)

Training Center Duration **3 Days**

For More Information **Learning Services, USA (training.usa.plm@siemens.com)**

The **Multi-Step Nonlinear with Solutions 401 and 402 with Femap for pre/post** course covers the advanced nonlinear capabilities in Simcenter Nastran. It presents types of nonlinear effects in models including material, geometric, and contact as well as explaining the solver steps in the solution process. It identifies difficulties which nonlinear solutions can pose and offers best practices for debugging convergence problems with nonlinear solutions.

The course includes static, dynamic, and modal-type solutions. The solver capabilities for material nonlinearities including plasticity, hyperelasticity, and creep are discussed. Geometric nonlinearities and contact algorithms and parameters for these solvers are introduced. Hands-on workshop exercises supplement the lecture content, including exercises specifically designed to help the student understand convergence criteria and debug models.

#### WHO SHOULD ATTEND

This course is intended for engineers who are familiar with finite element analysis in Femap who will be using Simcenter Nastran to perform nonlinear analysis.

#### PREREQUISITES

Required courses:

- Introduction to Finite Element Analysis with Simcenter Pre/Post (NAS111-GH)

#### COURSE TOPICS

- Multi-step Solution Sequences
- Nonlinear Dynamics
- Contact
- Large Displacements
- Large Strains
- Plasticity / Hyperelasticity / Creep
- Nonlinear Boundary Conditions
- Debugging Nonlinear Solutions

#### PROVIDED COURSE MATERIAL

- Student Guide