

## **FEMAP&Nastran Introductory Course** **FEA Training (3 days)**

### Course Agenda

**17 February 2009**

**Time: 08:30-16:30**

- Software Installation and Preferences
- Modeling Procedures in Femap  
*Exercise 1 - Analyzing a Solid Part*
- Femap User interface and the On-Line Help
- View and Display options  
*Exercise 2 - User Interface*
- Mesh Sizing and Meshing  
*Exercise 3 - Hexahedral versus Tetrahedral Meshing*
- Defining Materials and modifying materials
- Defining Properties  
*Exercise 4 – Analyzing a Beam Model*

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- Building Geometry in Femap, Import and Modifications  
*Exercise 5 - Beam/Plate Meshing*  
*Exercise 6 - Creating and Meshing a Solid Model*  
*Exercise 7 - Fixing and Meshing Bad Geometry*  
*Exercise 8 - Mesh Repair*
- Midsurfacing of Geometry  
*Exercise 9 - Midsurface Modeling*
- Definitions of Loads and Constraints  
*Exercise 10 - Bearing Load*
- Groups and Layers  
*Exercise 11 - Working with Groups and Layers*
- Visualizing and Documenting Results  
*Exercise 12 - PostProcessing with Deformed Contour Plots*
- Assembly Modeling
- Analysis Set Manager and Nastran Solution Sequences

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19 February 2009

Time: 08:30-16:30

- Nastran for FEMAP Basic Analysis
- Nastran Overview, Analysis Types and Features
- FEA Model Input and Output
- Nastran Input Data
  - Executive Control Section Set-Up*
  - Case Control Section Set-Up*
  - Bulk Data Entries*
  - Coordinate Systems*
- Nastran Element Library
  - One-Dimensional Elements*
  - Two-Dimensional Elements*
  - Three-Dimensional Elements*
  - Specialized Elements*
- Nastran Basic for FEMAP Analysis Set-Up
  - Linear Static Analysis*
  - Normal Modes (Modal) Analysis*
- Nastran Basic for FEMAP Modelling Practice
  - Common Types of Errors*
  - Minimum Recommended Model Checks*

The agenda may be changed without notice