



# IFS ACADEMY

Training For The Future!!

## Finite Element Analysis using ANSYS Mechanical APDL & CivilFEM

Course Curriculum (Duration: 70 Hrs.)

- Introduction to Finite Element Analysis
- FEA and ANSYS with CivilFEM
- ANSYS and CivilFEM Basics
- The GUI
- General Analysis Procedure
- Coordinate Systems
- Element Types
- CivilFEM Materials
- CivilFEM Cross Sections
- CivilFEM Shell Vertex
- CivilFEM Member Properties
- CivilFEM Beam & Shell Properties
- CivilFEM Solid Sections
- Combinations
- CivilFEM Concrete Check and Design
- CivilFEM Steel Checking
- Envelopes
- Seismic Design

### Examples:

Example 1: Stress Analysis of a Cantilever Steel Beam

Example 2: Elastic Beam Analysis with Generic Section

Example 3: Check by Eurocode No.3 a Steel Truss

Example 4: Frame Reinforcement by Eurocode No. 2

Example 5: Shell Reinforcement According To Eurocode No. 2

Example 6: Results Combination in Hexagonal Shell

Example 7: Biaxial Bending + Axial Force Checking According to BS 8110

Example 8: Compression Buckling

Example 9: Check a Prestressed Slab Bridge

Example 10: Push-over analysis

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