CADGROUP
ONLINE TRAINING

AUTODESK® INVENTOR
Analysis & Simulation

This 3-day course provides a comprehensive overview of analysis tools available in Autodesk® Product Design Collection: Inventor FEA & Dynamic Simulation, Nastran In-CAD, Shape Generator, Frame Generator. It covers the foundations of the Nastran In-CAD and Inventor FEA & Dynamic Simulation functionally with primary aim to build solid understanding in FEA (modelling assumptions, limitations, accuracy and interpretation of results). It is a balanced blend of standard Autodesk® Inventor FEA and Nastran In-CAD trading courses with extra theory and examples. It focuses on practical work-related analysis problems.

COURSE OUTLINE

- Introduction to Engineering Analysis:
  Stress analysis overview; dynamic simulation overview.
- Stress Analysis (Nastran In-CAD):
  Analysis settings and sub-cases; idealisations and materials; constraints and loads; connectors; viewing analysis results; meshing (mesh control and convergence); contacts and symmetry in assembly modelling; modal analysis (normal modes); non-linear analysis; linear buckling analysis.
- Inventor Dynamic Simulation:
  Creating joints; defining loads and joint properties; running simulations and analysing results; building non-redundant models; sharing dynamic simulation results with stress analysis.
- Other Lessons:
  Surface (shell elements) modelling; working with composite materials; frame analysis tool; shape generator; performing a parametric design study; non-liner transient analysis; non-liner buckling analysis; frequency response analysis; transient response analysis; thermal analysis; solving real world job-related problems (student input).

PREREQUISITES

For online training, students should have access to a machine with Inventor installed and activated. Having a dual monitor setup is highly recommended.

INCLUSIONS

6 half days of Online Training and Tuition, Cadgroup Certificate of Completion, and a Inventor Analysis and Simulation Fundamentals eBook.

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