



Course Code	EDU-CAT-E-EST-F
Brand & Release	CATIA V5R17
Duration	1 day
Language	English
Level	Fundamentals
Method	Companion and ILT

Training Material References

Instructor Foils: EDU-CAT-E-EST-FI-V5R17
Foils: EDU-CAT-E-EST-FF-V5R17
Exercises: EDU-CAT-E-EST-FX-V5R17

Objectives

- Map external load data and combine loads/masses
- Optimize the computation of frequency analyses
- Analyze a sub-set of a symmetric model
- Manage multi-analyses and find critical values
- Perform a buckling analysis
- Customize the display of results and reports

Participants' Profile

Mechanical Designers
Structural Analysts

Prerequisites

- Generative Part Structural Analysis Expert

Content

This course will teach you how to re-use existing loads, and apply combined loads and conditions to a mesh model. You will learn how to optimize computation times, manage complex analysis cases, and customize the resulting output.

Advanced Pre-Processing

- Visualization Transferred onto Mesh
- Bearing Loads
- Data Mapping
- Self-Balancing on Load set
- Combined Loads/Masses
- Thermo-mechanical loads
- Local 1D Property
- Variable cross section beams
- Advanced 2D properties
- Periodic conditions
- Grouping for Pre-processing
- Local Adaptivity Specifications
- Mapping Property
- Import V4

Advanced Analysis Case Management

- Multi Analysis Case
- The Buckling Case
- Contact Pressures
- Frequency shifting
- Combined Case
- Static constrained modes Case
- Envelop Case
- Pre-processing Case
- Multi Loads Case
- Transfer of Computed Loads/Displacements

Advanced Post-Processing

- Advanced Customisation
- Advanced Report
- Advanced images
- Export of nodal values
- Grouping
- Local sensors
- Image template
- FEM model images

EST Functionalities

Frequently Asked Questions

Exercises

- Ex. 1: Advanced Analysis of Landing Gear Assembly (120min) / Aerospace
- Ex. 2: Bearing loads Analysis (10min) / All sectors
- Ex. 3: Hanger Buckling Analysis (15min) / All sectors
- Ex. 4: Door Fuselage Buckling Analysis (30min) / Aerospace
- Ex. 5: Pressure Contact between Rod and Axis (20min) / Automotive
- Ex. 6: Blade Analysis (120min) / Aerospace
- Ex. 7: Truss Analysis (120min) / All sectors
- Ex. 8: Toy surfacic Analysis (120min) / Fabrication & Assemblies Consumer Goods
- Ex. 9: Static constrained modes / All sectors
- Ex. 10: Adaptivity (120min) / All sectors
- Ex. 11: Automation (30min) / All sectors
- Ex. 12: 12. Static Constrained Modes Case (10min) / All sectors
- Ex. 13: 13. Applying Mapping Property (30min) / All sectors
- Ex. 14: 14. Transfer of Loads (15min) / All sectors
- Ex. 15: 15. Transfer of Solution (15min) / All sectors
- Ex. 16: Multi-Loads Analysis (30min) / All sectors