



# CATIA V5 TRAINING – FEA PART STRUCTURAL ANALYSIS

## Who should attend:

Engineer and designer

## Duration:

3 days

## Methodology:

Practical hands-on by using CATIA software

## Prerequisite:

CATIA Fundamental

## Introduction

**Generative Part Structural Analysis** will teach you how to use basic Finite Element Analysis pre-processing techniques and post-processing tools, including the concept of defining virtual parts to avoid excessive geometric modeling. You will learn how to perform static analysis on a single part, and how to use adaptive meshing to achieve predefined accuracy.

## Objectives:

### Generative Part Structural Analysis

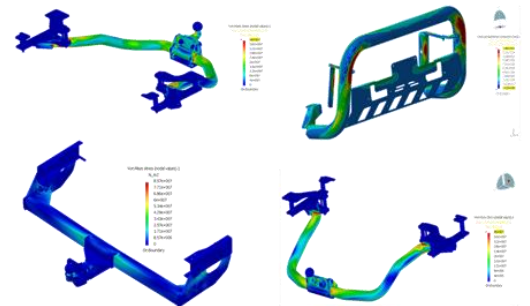
- Understand why, when, and how to use Finite Element Analysis
- Use different element types and shapes to mesh a part
- Apply clamp, slider, and iso-static restraints
- Define and customize the material properties of the parts to be analyzed
- Apply pressure, acceleration, and force density loads
- Define virtual parts to simplify the analysis

### Generative Assembly Structural Analysis

- Understand what type of assembly analysis
- Define analysis connection between components
- Using existing assembly constraints to auto create connections
- Assign connection property that fit the joints.

## Course Outline:

Advanced Pre-Processing Tools  
 Historic of Computation  
 Frequency Analysis  
 Result Visualization  
 Computing a Frequency Case  
 Result Management  
 Computing with Adaptively Refinement  
 Assembly Analysis Overview  
 Analysis Connections and Property  
 Analysis Assembly Management



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