



Define your CATIA skills

AscendBridge: CATIA V5 Generative Structural Analysis; Fundamental, Expert & Assembly

OBJECTIVE: This course covers the main tools for Structural Analysis on a single part. Throughout this course, you will learn how to perform a basic static analysis using the finite elements method. Upon completion of this course you will be able to: Define and customize material properties, Apply pressure, acceleration and force density loads; and define virtual parts, Apply pivot, ball-joint, and user-defined restraints, Compute a frequency analysis for a single part, Create planar sections with which to visualize internal result values, Compute and refine a mesh using adaptive meshing in order to achieve a pre-defined accuracy.

Price per Student	\$1,800.00	
Duration: 3 Days	Student Profile: CATIA V5 Mechanical Designers	Pre-requisites: V5 Fundamentals
TOPIC	DETAILS	TOPIC DURATION
Generative Part Structural Analysis Fundamental	<p>Introduction to Finite Element Analysis</p> <ul style="list-style-type: none"> • What is Finite Element Analysis, • Why to Use Finite Element Analysis • Application of Finite Element Analysis <p>Introduction to GPS Analysis</p> <ul style="list-style-type: none"> • Accessing the Generative Part Structural Analysis Workbench • The Generative Part Structural Analysis Interface • The GPS General Process • The Generative Part Structural Analysis Tree Structure <p>GPS Pre-Processing</p> <ul style="list-style-type: none"> • Managing Mesh-Part, • Defining Restraints, Defining Loads <p>Computation</p> <ul style="list-style-type: none"> • Specifying the External Storage • Computing a Static Case 	1 Day



Register on-line or call 1-888-326-8326
 Information contained within is subject to change. All classes are dependent on minimum enrollment
 Prices indicated do not include applicable taxes





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Generative Part Structural Analysis Fundamental (cont'd)

GPS Post-Processing

- Results Visualization,
- Results Management,
- Refinement

Managing Analysis

- About Saving an Analysis Document,
- About Save As
- How to Use Save Management

Saving Document Using 'Send To' Mechanism, User Settings

Generative Part Structural Analysis Expert

This course will focus on advanced Finite Element Analysis pre-processing techniques and post-processing tools, including the concept of virtual parts to avoid excessive geometric modeling. It will teach you how to perform a frequency analysis on a single part, and the use of adaptive meshing to achieve pre-defined accuracy.

1 Day

GPS Advanced Pre-Processing Tools

- Advanced Pre-Processing Tools
- Frequency Analysis

Computation

- Computing a Frequency Case
- Computing with Adaptivity
- Historic of Computation

GPS Advanced post-Processing Tools

- Results Visualization
- Results Management

Refinement



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Generative Assembly Structural Analysis

This course will teach you how to perform a Finite Element Analysis using an existing assembly. You will learn how to create connections between assembly components and how to assign appropriate connection properties. You will also learn how to create an analysis assembly from existing meshed parts.

Introduction to GAS

- Generative Assembly Structural Analysis Overview
- Hypotheses Used for Analysis

Analysis Connections

- Analysis Connection using Assembly Constraints
- General Analysis Connection
- Defining Line Analysis Connections
- Defining Point Analysis Connections , Defining Surface Analysis
- Connections Points to Points Analysis Connection
- Set of Analysis Connections

GAS Connection Properties

- Face to Face Connection Properties
- Distant Connection Properties
- Welding Connection Properties
- Nodes to Nodes Connection Property

Compute a Static Analysis for an Assembly

Analysis Assembly Management

- Create and manage an Analysis Assembly model using existing meshed parts

1 Day