CATIA V5 Numerical Control Manufacturing

<table>
<thead>
<tr>
<th>Course Code</th>
<th>EDU-CAT-en-NCI-F, PMG-F, SMG-F, AMG-F, MMG-F</th>
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</thead>
<tbody>
<tr>
<td>Brand &amp; Release</td>
<td>CATIA V5R25 (V5-6R2015)</td>
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<tr>
<td>Duration</td>
<td>5 days</td>
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<tr>
<td>Level</td>
<td>Fundamentals</td>
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<td>Prerequisites</td>
<td>CATIA V5 Fundamentals</td>
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**Objectives:**
Upon completion of this course students will gain an understanding of how to utilize CATIA V5 manufacturing workbenches to create 2.5 through 5 axis tool paths utilizing solid, prismatic, and surface machining operations. Topics include:

- Overview of tools specific to the Prismatic, Surface, Advanced Part Machining and Multi-Axis (optional) Workbenches.
- How to setup and create 2.5-5 axis machining operations including macros, auto sequencing, and tool path verification & simulation.
- How to generate output using the integrated post processor.
- How to import CATIA V4 data (optional)
- How to create prismatic machining areas and rework areas.
- 5-Axis machining operations (as requested by students).
- Advanced Part Machining operations including: Multi-Axis Flank Contouring and Cavity Roughing operations.

**Class Structure- Lecture and Exercises covering:**

- NC Review
- Introduction: Workbench Presentation
- Creating a Part Operation
- Importing Files
- Tool Path Simulation and Verification
- Generating Outputs (APT Source - NC Code – HTML document)
- Tool Management
- Axial Operations
- Generating Auxiliary Operations in Part Operations
- Managing Design Changes
- Transition Paths (macros)
- Creating a Machining Feature
- Geometrical Zones
- Machining/Slope Area Creation
- Rework Area Creation
- Offset Group Creation
- Creating 3-Axis Surface Machining Operations
- Roughing Operations
- Sweeping Operations
- Pencil Operations
- Contour-driven Operations
- Spiral Milling Operations
- Profile Contouring Operations
- Multi-Axis Operations (as requested by students)
  - Multi-Axis Sweeping
  - Multi-Axis Contour Driven
  - Multi-Axis Curve Machining
  - Multi-Axis Isoparametric Machining
  - Multi-Axis Drilling
  - Multi-Axis Tube Machining
- Flank Contouring Operations
- Cavity Roughing operations