CATIA V5 Customized Reverse Engineering Training

OBJECTIVE: Enable users and designers to learn advanced tools for Reverse Engineering of the Surface from scanned point cloud or tessellated mesh data in CATIA V5. Learn the techniques to morph the Part or Tooling surfaces to apply the required compensation as per the need of the production process to conform to the permissible geometrical and tolerance measurements as per industry standards and practices.

DURATION 3.5 Days	**STUDENT PROFILE** CATIA V5 Users	**PRE-REQUISITES** V5 Fundamentals

TOPIC	DETAILS	DURATION
Digitized Shape Editor (DSE)	▪ Importing the Scan data. ▪ Manipulating and optimizing the digitized point cloud or STL mesh data. ▪ Creating Scans using curvature analysis and deviation on the imported Cloud or Mesh. ▪ Creating Curves from scans using automatic tools.	1 DAY
Quick Surface Reconstruction (QSR)	▪ Working with the curves on the Scans. ▪ Creating Canonical or Free foam Surfaces. ▪ Performing Deviating Analysis and analyzing the recreated surfaces. ▪ Using Automatic Surface options to create the surface on mesh. ▪ Creating Network of curves and surfaces on the network.	1 DAY
Realistic Shape Optimizer (RSO)	▪ Creating Deviation analysis or displacement files. ▪ Optimizing the deviation files. ▪ Vector Field Optimization. ▪ Morphing the surface based on various parameters to compensate for deformations.	.5 DAY
Customer Parts Consulting	▪ Reviewing the actual scan data of customer parts and converting into useable surfaces. ▪ Formulating the Techniques and methodologies to handle various types of scanned part data and how to morph the tooling surface to compensate for spring backs or distortions due to manufacturing processes	1 DAY