NX CAD for Design Engineer

Course Curriculum (Duration: 90 Hrs.)

Prerequisites: Students attending this course should be familiar with Engineering Drawing, Machine Drawing, Limits, Fits and Tolerances.

Chapter 1: Essentials for NX Designers

- Overview:
- Opening and working with parts
- NX Interface:
- Coordinate Systems:
- Creating parts with sketches:
- Creating part features:
- Geometry Editing
- Creating datum geometry to support design intent
- Examining the structure of a model
- Editing and manipulating the sketches
- Trimming a solid body
- Creating swept features with offset and draft
- Creating and editing holes
- Creating and manipulating shell features
- Copying and mirroring part segments
- Blending and chamfering edges
- Modifying geometry of imported parts
- Loading and working with assemblies
- Adding and positioning parts in an assembly

Chapter 2: NX Synchronous Modeling Fundamentals

- Basic concepts of Synchronous Modeling
- Modify Face
- Detail Feature
- Delete Face
- Reuse commands
- Synchronous Modeling relationships
- Dimension commands
- Adaptive Shell
- Edit Cross Section and Edit Section
- Optimize Face
- Projects: Create and edit parts using Synchronous Modeling

Chapter 3: NX Sheet Metal

- Sheet Metal workflow
- Establish basic part characteristics
- Define the basic shape of the part

- Constructing base features
- Sheet Metal corners
- Sheet Metal cutouts
- Sheet Metal deform features
- Flat Solid and Flat Pattern
- Advanced Sheet Metal commands
- Analyze Formability – One step
- Aerospace Sheet Metal
- Working with non-sheet metal data

Chapter 4: Drafting Essentials

- Drafting overview
- Part Navigator
- Master model drawings and drafting standards
- Drawing sheets
- Drafting views
- Custom views
- Move, copy, and align views
- Hiding geometry in drafting views
- Updating drawings and drafting views
- Centerline symbols
- Dimensions
- Notes and labels
- Balloon symbols
- GD&T symbols
- Surface finish, weld, and custom symbols
- Section views
- Editing section lines
- Maintaining associativity
- Detail views
- View boundaries
- Broken views
- Break-out section views
- View dependent edits
- Part Attributes
- Parts lists
- Sectioning assembly views
- Exploded views
- Ordinate dimensions
- Hole Tables
- Converting drawings to master model