



## **NX CAD Advance Course**

### **Course Curriculum (Duration: 120 Hrs.)**

**Prerequisites:** Students attending this course should be familiar with contents of NX for Design Engineer course.

#### **Chapter 1: Intermediate NX Design and Assemblies**

- Capturing design intent by constraining sketches
- Applying advanced techniques to sketched parts
- Creating freeform shaped surfaces
- Capturing design intent with formulas
- Duplicating features
- Organizing the assembly model structure
- Controlling the display of parts in an assembly
- Modeling parts within the context of an assembly
- Building geometric relationships between parts
- Modifying parts at the assembly level
- Creating geometric relationships between parts
- Modifying geometry for manufacturing processes
- Creating a round or fillet with a varying radius
- Simplifying geometry for down stream applications
- Storing positional constraints in the part
- Controlling instances of a part in an assembly
- Defining reusable geometry
- Revising and replacing parts in assemblies
- Capturing part shape variations when assembled
- Controlling moving part positions in an assembly

#### **Chapter 2: NX Synchronous Modeling and Parametric Design**

- Documenting design intent
- Editing parametric models
- Associative curve operations
- Emboss geometry
- Blending techniques
- Interpart references
- Capturing part shape variations when assembled
- Design optimization
- 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

### **Chapter 3: Industrial Design with NX**

- Spline review
- Studio Splines
- Construction and Reference Geometry
- Working with raster images
- Curve Tools 1
- Introduction to Studio Surfaces
- Introduction to Shape Analysis
- Workflow 1
- Studio Surfaces 2
- Additional freeform features
- Blending
- Curve tools 2
- Trimming and sewing
- Workflow 2
- Enlarge
- Shape Analysis 2
- Workflow 3
- Deviation analysis
- Refit Face
- Visualization

### **Chapter 4: NX Large Assembly Management**

- Working in large assemblies
- Manipulating assemblies
- Creating representations
- Create component envelopes in an assembly
- Assembly Cloning
- Assembly Clearance
- Advanced Weight Management
- Assembly Arrangements
- Assembly Sequencing and Motion
- Assembly Cut
- Deform Part
- Reference Sets
- Assembly Navigator

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IFS Academy, Pune  
T:+91-20-6400 7296, M: +91-98228 49628, +91-99224 40102, E: training@ifsacademy.org,  
Visit Us At: [www.ifsacademy.org](http://www.ifsacademy.org)