

NX 12 SYLLABUS

Module	Session	Contents
Introduction	1	NX12 as a CAD software: - Concept of Parametric Modeling, Feature Based Modeling, User Interface, Mouse operations, File types and Management, drawing profiles. Major user industries of NX12. Why NX12 is preferred?
Sketcher	2	Sketcher: Profile toolbar, operation (corner, chamfer, relimitations, transformations, project 3D element), constraints, types of constraints, workbench.
	3	Sketcher:- sketch tools, tools(Sketch solving status, sketch analysis, output feature), visualization toolbar, user selection filter.
	4	Modeling of Machined component, Material Addition and Removal (Pad, Pocket, Shaft, and Groove), Sketch and Positioned Sketch, Types of Fillets, Types of Chamfer, Types of Hole.
	5	Modeling of Machined component - 2. Pattern (Rectangular, Circular, User), Thread/Tap, Datum Features (Plane, Axes, Points), Simple Draft. Frequently used commands for Machined components in NX12 / Creo

Modelling of Machined Component (Part Modelling)	6	Advance Design features :- Axis System, Types of draft, Shell, Stiffener, rib slot, Multisection solid, Removed multisection solid , Apply Material, Measure, Render.
	7	Introduction To Multibody concept:- Copy Paste, Paste special, Insert body, Boolean Operations (Add, remove, Intersect), Transformation (Translation, Mirror, Scaling, Affinity).
	8	Multibody concept:- standard example , Negative body concept (Boolean Operations)
	9	Advance Features: - Parameters, Formula, Relations, and Design Table.
Drafting	10	Introduction To Drafting & Detailing Theory:- (types Generative – Interactive), Initial Drafting setting, Sheet Background, Views (ortho, ISO), Dimensions (Types-Generate Dimension & Create Dimension).
	11	Views:- (Aux, Section, Details, Clipping, Broken), View properties, DATUMS & Tolerance
	12	Annotations:- GD & T, Symbols, Note, Leaders, Table, Symbols (Machining, Roughness, Welding, Custom), Dress-up Toolbar.

	13	Surfacing Modeling based Plastic Component:- Environment, Tool bars, Surface Creation (Extrude, Revolve, Sphere, Cylinder), Surface Modification, Surface Editing (Trim, Split, Shape Fillet, Close Surface, Thickness).
	14	Surfacing:- Offset(All 3 types), Fill, Blend, Join, healing, Project-Combine.
	15	Advanced Surfacing:- Adaptive Sweep, Sweep(ALL), Multisection Surface.
Wire-frame Modeling	16	Wire-frame Modeling:- Point, Line, Planes, Curves, Circle-Conic, STANDARD EXAMPLES. Use of wire frame modeling,
BIW Templates	17	BIW Templates:- What is BIW, Junction, Diabolo, Hole, Mating Flange, Bead, Blend Corner.
Assembly & Mechanism	18	Introduction to Assembly:- Types of assembly approach, Types of Constrains and DOF, placement of components in the Assembly, Manipulating Components, BOTTOM UP Approach
	19	TOP DOWN Approach:- Part, Product, Component, Space Analysis, Reuse Pattern, Save management.
	20	Assembly Drafting:- Scene(Exploded View), Bill of material, Ballon creation, Graph Tree Reordering.