
NX CAD Training Contents



Day 1:

1. Introduction to CAD/CAM and NX:

- Concept Parametric/Un-parametric Modelling
- UG CAD User Interface and setting Preferences
- Pull Down Menus
- Resource Bar/Part Navigator
- Status Bar, Toolbars, Icons, Pop-up Menu,
- Visualization Commands Zoom, Rotate, Pan etc,
- Access Methods, Using Snap Options.

2. Customer Defaults

- Customer Default
- Customer Defaults levels
- Updating to a new release of NX Setting Customer Defaults

3. Customization

- Setting commands on diff. menu bars & tool bars
- Short cut keys
- Roles creation
- Working on full screen



4. Sketcher:

- Curve, Curve from curve,
- Receipt curve, datum, point,
- Constraining(Dimensional & geometrical),
- Trim ,extend, Make corner, etc.

5. Solid Modelling

Design Feature

- Extrude with all option,
- Revolve with all option,
- Boolean operation (Add, Remove Subtract, Intersect)
- Primitives (Block, Cylinder, Cone, Sphere, etc.)

6. Practice on diff. Sketches & Solids.

Day 2:

1. Datum plane
2. Datum axis
3. Datum points
4. Design features continuation
 - Sweep along Guide
 - Hole



- Boss
- Pocket
- Pad
- Slot, Groove
- Emboss
- Rib
- Thread
- UDF

5. Detail Feature

- Edge Blend
- Face blend
- Chamfer
- Draft
- Draft Body

6. Associative Copy

- Extract Body,
- Pattern features,
- Mirror Body, Mirror geometry,
- Combine, Unite, Subtract, Intersect, Emboss, Patch, Assembly cut, join face, Sew (solid & Sheet)



7. Practice projects

Day 3:

1. Trim

- Trim Body
- Split body
- Sheet trim
- Trim & extend
- Divide face

2. Offset Scale

- Shell
- Thicken
- Offset face
- Scale body
- Sheet to solid assistant
- Offset face

3. Free form (Surfacing)

- Four point surface
- Swoop
- Through points



- From poles
- Transition
- Bounded plane
- Sheet from curves
- Ribben builder
- Extend surface
- Law extension
- Silhouette flange

4. Mesh surface

- Ruled
- Through curve
- Through curve mesh
- Swept
- N-sided surface
- Bridge

5. Blend Surface

- Soft blend
- Face blend
- Aesthetic face blend
- Styled blend



- Style corner

6. Curves

- Line
- Arc
- Circle
- Conic
- Helix
- Curve on surface
- Basic curves

7. Derived curves

- Offset
- Project
- Intersect
- Combined projection
- Bridge, join, simplify

8. Practice project



Day 4:

1. Assembly
2. Bottom up concept
3. Top down concept
4. Assembly constrains
5. Wave geometry linker
6. Mirror Assembly
7. Assembly component array
8. Explode assembly
9. Sequencing Feature group
10. Reference set
11. Layer setting
12. Arrangement in assembly
13. Surface & curve analysis
14. Face analysis
15. Draft analysis
16. Model compare
17. Synchronous Modelling

- Move face
- Pull face
- Delete face
- Replace face
- Resize face



- Resize blend
- Delete face
- Cross-section edit etc.

Day 5:

1. Sheet Metal Design

- Tab
- Flange
- Contour flange
- Lofted flange
- Hem flange
- Blend, Jog
- Sheet metal from solid
- Break corner
- Closed corner
- Chamfer, Dimple, louver
- Drawn cut out
- Bead, Gusset, Extrude, Normal cut ,
- Blend taper, Resize bend radius, Resize bend angle
- Resize neutral factor, Unbend, Rebend, Convert to sheet metal, Flat pattern, Flatten



2. Drafting

- Drawing sheet
- Drawing views
- Section views
- Centre line
- GD&T
- Surface finish & welding symbol
- Dimensioning
- BOM
- Annotation

3. Project Work

4. Questions & Answers