

ADVANCED PRODUCTS DESIGN CONTENT

Part I. Review the fundamental products design.

- ✚ Reviewing the basic commands to create the solid models .
- ✚ Redefining the sketchers and changing the reference of sketcher properties .
- ✚ Redefining the solid model by the changing of the feature command properties .
- ✚ Updating the solid model result after redefined any features .
- ✚ Managing the model tree .
- ✚ Measuring and modifying the dimensions of the 3D solid models .
- ✚ Inserting a new feature into any positions on model tree .
- ✚ Creating the datum systems .
- ✚ Introducing the interface of the software .
- ✚ Creating the view – reference to develop the 2D sketchers .
- ✚ Practising and testing the 3D advanced sold parts .

Part II. 3D Surfaces Modeling

1. The basic commands to create a 3D surfaces.
 - ↳ Creating a surface with the Extrude command.
 - ↳ Creating a surface with the Revolve command.
 - ↳ Creating a surface with the Sweep command.
 - ↳ Creating a surface with the Loft command.
 - ↳ Creating a surface with the Boundary command .
 - ↳ Creating a surface by extracting face of the surface or solid part .
 - ↳ Practising.
2. The operation feature commands.
 - 2.1. The dress-up feature commands.
 - ↳ Creating the edge fillet.
 - ↳ Creating the variable fillet.
 - ↳ Creating the full round (tritangent fillet).
 - ↳ Creating the chamfer of the edges.
 - ↳ Practising.
 - 2.2. The transformation feature commands.
 - ↳ Translating the surfaces.
 - ↳ Rotating the surfaces.
 - ↳ Symmetrizing the surfaces.
 - ↳ Copying the surface with pattern command.
 - ↳ Scaling a surface.
 - ↳ Practising.
 - 2.3. Merged operations.
 - ↳ Trimming the surface by curve, surface or plane datum .
 - ↳ Merging two surfaces together .
 - ↳ Practising.
3. 3D curves creating.
 - ↳ Creating the curve by point to point .
 - ↳ Creating the curve by copying the edge .
 - ↳ Creating the projection curves .
 - ↳ Creating the curve by projection 2 curves .
 - ↳ Creating the curve by interseting two surfaces .
 - ↳ Creating the curve by offset the curve .
 - ↳ Splitting the curves .
 - ↳ Practising .
4. General practise and testing.
 - ↳ Practising the complex 3D products .
 - ↳ Testing .

Part III. Plastic products design

- ✚ Practising on real products .
- ✚ Creating a solid model from imported surfa ce.

- ✚ Skills to create the plastic products .
- Part IV. General practising and final testing.
- ✚ Practising the general product.
- ✚ Final examination.