



TM

## **SolidWorks Workshop**

(Course Content)

## Topics to be covered in SolidsWorks Workshop

### 1. Introduction to CAD

- What is CAD, ED
- 2D & 3D CAD
- Different CAD software available in market
- SolidWorks, its history, widespread use in the industry and benefits
- Competitive info
- Recent Developments in CAD
- Future of CAD

### 2. Working with SolidWorks

- SolidWorks intuitive interface
- Different module of SolidWorks and its uses
- Task pane features
- Versions and changes in SolidWorks
- Gold Partners
- Practice workbook

### 3. 2D Sketching

- Sketching Interface
- Default planes & adding new planes
- Sketching entities like line, rectangle, circle, arcs etc
- Adding relations
- Dimensioning entities (smart dimension, vertical & horizontal dimension etc)
- Design intent
- Manipulating geometries (trim, copy, move, mirror, patterns etc)
- Using sketch tools
- Keyboard shortcuts
- Mouse gestures
- **Sketching Practice from workbook**

#### 4. Part Modeling

- Modeling approaches
- Features (Boss Extrude & Cut, Revolve, patterns, fillets etc.)
- Instant 3D
- Hole Wizard
- Lofts, Sweep, Boundary boss/base
- Design tree
- Parent-child relationships
- Rollback & feature freeze
- Evaluate features-measure
- Saving parts
- **Modeling Practice from workbook**

#### 5. Part Drawings & detailing

- Drawing Interface
- Types of drawing sheet
- Importing Models and model items
- Dimension palette
- Title blocks & linking properties
- Drawing templates & sheet formats
- Views placement
- Changing colors, scale, lines, projections etc.
- Section views, detail views, auxiliary views, broken out views
- Annotations
- Bi-directional associability between part and drawing
- Saving drawings
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#### 6. Simulation Xpress

- Use of simulation
- Analysis for stresses, deformations & FOS
- Design optimization
- Creating reports
- **Practice on parts modeled**

## 7. Assembling Components

- Assembly features
- Insert components, copy with mates, mirror etc.
- Adding relations (mates)
- Library components
- Smart fasteners
- Editing components in assembly
- Insert Part
- In context features
- In-place mates
- Editing mates & relations
- Exploded Views
- Short cuts
- Evaluate features (measure, assembly visualization and statistics)
- **Practice from workbook**

Bottom-Up  
Assembly approach

Top Down  
Assembly approach

## 8. Assembly Drawings

- Creating multiple drawing sheets
- Exploded views
- Removing selected components from views
- Alternate position views
- Cut-out views
- Creating BOM
- Ballooning
- Manipulating BOM templat.
- Adding drawing sheets from other files

## 9. Motion Study & Animations

- Adding kinematic constraints
- Adding actuators, time frames, forces, contacts etc.
- Creating animation
- Walkthrough

## 10. Rendering

- Editing appearances, scenes, lighting etc.
- Adding decals.
- Rendering images.
- Scheduling render

## Contact

We ensure that you will find our training programs extremely beneficial for your students. If you have any queries kindly get back to us.

We are looking forward to a quick and positive response from you and a long term association with your esteemed organization.

Regards,  
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