

AN IOAC INITIATIVE
Workshop on Solid Works (3 D experience)

5 Day workshop
6-11 May, 2024
Organized by
Department of Mechanical Engineering



ATMA MALIK INSTITUTE OF TECHNOLOGY AND RESEARCH

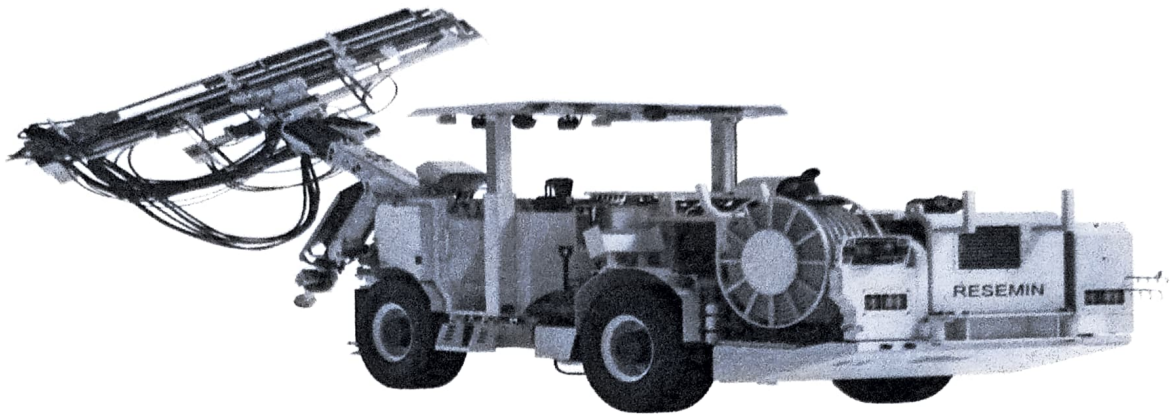
Affiliated to MSBTE, Mumbai,
Approved by AICTE, New Delhi & DTE, M.S.
At: Moholi, Post:Aghai, Via Kalyan, Dist:Thane, 421301

SOLIDWORKS



INTRODUCING SOLIDWORKS





Course objective	Why Solid Works	Course content
After completion of this course you will be able to: 1. Sophisticated but easy to use and navigate 3D CAD design 2. Preloaded templates and a CAD library for greater efficiency 3. Automation 4. Effectively and easily produce 2D drawing to use for production 5. Rendering can be produced at a photorealistic level and animation are easy to creat.	1. Rendering 2. Simulation 3. Evaluation 4. Manufacturing 5. Exclusive features 6. 3 D printing 7. 2 D Modelling 8. 3 D Modelling	1. Introduction 2. SOLIDWORKS Fundamentals & introduction to sketching 3. Basic Part Modeling 4. Advance part Modeling 5. Assembly Mode 6. Drafting

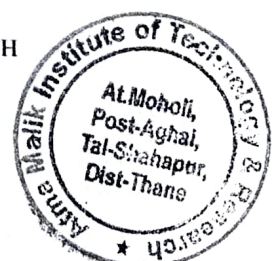
Contact Us

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Department of Mechanical Engineering

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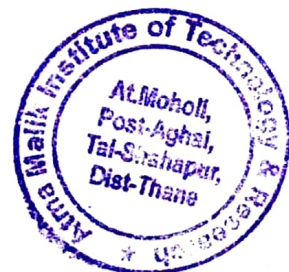


Workshop on Introducing Solid Works

SYLLABUS/ COURSE CONTENT

Sr. No.	Course Content	Number of Hours
1.	Introduction to SolidWorks and Basic Sketching i) Introduction to SolidWorks: ii) Basic Sketching: iii) Hands-on Exercises:	06
2.	Part Modeling Fundamentals i) Introduction to Part Modeling ii) Editing Features iii) Advanced Sketch Tools iv) Hands-on Exercises	06
3.	Advanced Part Modeling and Design Techniques i) Advanced Features: ii) Design Intent and Best Practices iii) Hands-on Exercises	06
4.	Assembly Modeling i) introduction to Assemblies ii) Managing Assemblies iii) Hands-on Exercises	06
5.	Drawing and Documentation i) Creating Drawings ii) Advanced Drawing Techniques iii) Hands-on Exercises	06

Schedule



Workshop on Introducing Solid Works

Day 1: Introduction to SolidWorks and Basic Sketching

Morning Session:

1. Introduction to SolidWorks:

- Overview of SolidWorks interface
- Understanding the Feature Manager Design Tree
- Customizing the workspace

2. Basic Sketching:

- Creating and managing sketches
- Using basic sketch tools (Line, Circle, Rectangle, etc.)
- Sketch relations and dimensions

Afternoon Session:

Creating simple 2D sketches

- Adding dimensions and relations to sketches
- Practical exercise: Designing a basic 2D part



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Day 2: Part Modeling Fundamentals

Morning Session:

1. Introduction to Part Modeling:

- Extrude Boss/Base
- Revolve Boss/Base
- Extrude Cut and Revolve Cut

2. Editing Features:

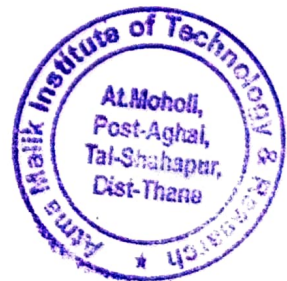
- Modifying existing features
- Understanding feature order and dependency

Afternoon Session: 3. Advanced Sketch Tools:

- Using splines and complex curves
- Creating patterns and mirrored sketches

4. Hands-on Exercises:

- Building a 3D part using various features
- Modifying and editing part features
- Practical exercise: Designing a mechanical part



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Day 3: Advanced Part Modeling and Design Techniques

Morning Session:

1. Advanced Features:

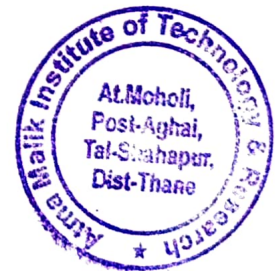
- Sweep and Loft
- Fillet and Chamfer
- Shell and Draft

2. Design Intent and Best Practices:

- Understanding design intent
- Using construction geometry effectively

Afternoon Session: 3. Hands-on Exercises:

- Creating parts with advanced features
- Applying fillets, chamfers, and shelling
- Practical exercise: Designing a complex 3D part



Workshop on Introducing Solid Works

Day 4: Assembly Modeling

Morning Session:

1. Introduction to Assemblies:

- Creating a new assembly
- Inserting components into an assembly
- Using the Mate tool to define relationships

2. Managing Assemblies:

- Assembly configurations
- Working with subassemblies
- Detecting and resolving interferences

Afternoon Session:

3. Hands-on Exercises:

- Building a simple assembly
- Applying various mates and constraints
- Practical exercise: Assembling a mechanical device



Workshop on Introducing Solid Works

Day 5: Drawing and Documentation

Morning Session:

1. Creating Drawings:

- Generating 2D drawings from 3D models
- Adding views (standard, section, detail, etc.)
- Dimensioning and annotating drawings

2. Advanced Drawing Techniques:

- Creating and managing drawing templates
- Using tables and Bill of Materials (BOM)
- Adding exploded views and assembly drawings

Afternoon Session: 3. Hands-on Exercises:

- Creating detailed drawings for parts and assemblies
- Practicing dimensioning and annotation
- Practical exercise: Producing a complete set of drawings for a project



CERTIFICATE

OF PARTICIPATION

This certificate is proudly presented to

Dadhekar Sarthak Rashmikanth.

For successfully completed the ADD on course titled "Introducing Solid Works"
organised by Department of Mechanical Engineering (Atma Malik Institute Of
Technology & Research) from 6th may 2024 TO 10th may 2024.


Coordinator




HOD


Principal

CERTIFICATE

OF PARTICIPATION

This certificate is proudly presented to

Coswami Satish Namal

For successfully completed the ADD on course titled "Introducing Solid Works"
organised by Department of Mechanical Engineering (Atma Malik Institute Of
Technology & Research) from 6th may 2024 TO 10th may 2024.

P. Kumar
Coordinator



[Signature]
HOD

[Signature]
Principal