



MILESTONE

INSTITUTE OF TECHNOLOGY

Upskill Reskill Stand Out



Since 2004...
YEARS OF
EXCELLENCE

31000+

Enrolled Students

17000+

Placed Students

150+

Company Tie-ups

100+

Job Oriented Courses

Master Diploma in

Product Design & Analysis

About us

Milestone Institute of Technology is a prominent institution that aims to be a global leader in teaching programs and the preferred training hub for the IT-ITES, Architecture/Construction, Mechanical, Graphic Design, Industrial Automation and Information Technology sectors. With a focus on providing quality qualifications, Milestone strives to enhance individuals' future prospects and opportunities, ensuring that their credentials are widely recognized and valued by employers and universities worldwide. One of Milestone's unique strengths lies in its ability to align its training programs with industry requirements. Through its subsidiary, **Milestone PLM Solutions Pvt. Ltd.**, Offers engineering design services to global companies, allowing students to receive practical,

hands-on training that prepares them for real-world challenges. Milestone Institute of Technology offers master diploma courses tailored to the needs of ITI, Diploma, and Graduate Engineering students specializing in Mechanical, Civil, Architectural, Interior, Graphic Design, Industrial Automation, and Information Technology streams. By providing comprehensive and industry-oriented education, Milestone equips its students with the skills and knowledge necessary to thrive in their respective fields. With a commitment to excellence and a forward-looking approach, **Milestone Institute of Technology** strives to shape the future of education by producing highly skilled professionals who contribute to the growth and development of industries on a global scale.



Mission and Vision

Our mission at **Milestone Institute of Technology** is to provide a comprehensive education solution that empowers students and enables them to excel in their chosen fields. **Milestone** believes in delivering a high-quality, hassle-free education experience to our students and thus ensuring their success and growth. Our vision is to be a global and unique leader of transformative education solutions. We aim to revolutionize the learning experience by leveraging technology and offering a diverse range of programs that meet the evolving needs of students and industries worldwide. Through our continuous efforts towards excellence, Milestone aspire to empower students and contribute to the advancement of society as a whole.

Why study with MIT?

What sets MIT apart from the rest of the institutions?

- From Last 20+ years we are in Training and Engineering Design Services, consistently upholding our commitment to excellence.
- We employ specialised visual teaching methods to accelerate your learning. All courses feature instruction using the latest software versions.
- Our highly skilled faculty deliver top-notch professional knowledge and offer personalised training to each student.
- We keep tracking student progress through assignments and projects.

Milestone Education Mission

Milestone aims to be a global leader in teaching programmes and the first-choice training hub for IT-ITES, Architecture/Construction, Mechanical, Industrial Automation, Graphic Design and IT sectors. Our goal is to enhance an individual's future prospects and opportunities by providing high-quality qualifications that are widely recognized and valued by employers and universities worldwide. Milestone-trained students are equipped with skills tailored to industry requirements, as Milestone also provides engineering design services to global companies through Milestone PLM Solutions Pvt. Ltd. Additionally, Milestone offers Master Diploma courses for ITI, Diploma, and Graduate Engineering students in the Mechanical, Civil, Architectural, Interior, Graphic Design, Industrial Automation, and IT streams.



Mechanical Engineering

Enhance your career with leading Mechanical Engineering courses in CAD, CAM, and CAE software. Our classes are designed to boost your skills and expertise through live projects and advanced learnings. Master essential techniques and gain impactful insights for successful career making in various domains from aerospace to automotive.

Graphic Design Software

Mechanical Engineering is a diverse field that involves designing, developing and analysing machines, systems, and devices. As one of the oldest and broadest engineering disciplines, it offers numerous career opportunities across various domains. Whether you're interested in aerospace, sheet metal, plastic products or automobile design, our mechanical engineering courses provide a comprehensive understanding and practical experience to excel in these areas..



Reverse Engineering | 3d Printing

Learn Reverse Engineering techniques and latest 3d printing technology in our state of art lab.



Live Industry Projects

Live Industry Projects/Internships offer invaluable real-world experience, bridging the gap between theoretical learning and professional practice.



Placement Assistance

We assure your successful career. Thanks to our tie-up with more than 100 companies.

Master the Skills in **Product Design and Analysis**

Master Product Design and Analysis course with covers the full spectrum of product development, from concept to production. Learn design thinking, sketching, CAD, and prototyping while mastering ergonomics, materials selection, and manufacturing processes to develop functional, innovative products.

Overview

Gain in-depth knowledge of the product development process, from conceptualization to final production. Through a blend of theory and hands-on projects, Product Design and Analysis course provides a deep dive into CAD, prototyping, ergonomics, and design for manufacturing to prepare you for careers in product design.



Why Choose This Course?

This course is ideal for aspiring product designers looking to build innovative, functional designs that meet market needs. With hands-on experience and expert guidance, you'll be prepared to excel in various industries.



100% Placement Assistance Program

Job placement assistance readiness.



Real time projects

Receive continuous feedback to enhance your learning.



Continuous Feedback

Receive continuous feedback to enhance your learning.

Master the Skills in Product Design and Analysis

TRAINING PRICE

Contact: +91 98198 57244 | 8454065555

COURSE DURATION

24 Weeks(Regular / Weekend) 1& ½ Hour

ONLINE / OFFLINE

Yes / Yes

Prerequisites

Basic Computer Skills

Topics Covered

Design Thinking and Concept Development:

- Overview of Design Thinking Process
- Rapid Prototyping Methods
- Concept Validation and Iteration

Sketching and Visualization Techniques

- Sketching Fundamentals
- Conceptual Visualization
- CAD-Based Visualization

1) AutoCAD Software

- Overview of AutoCAD Mechanical
- Introduction to CAD
- 2D Fundamentals

Drawing Basics and Modifying Tools

- Introduction to CAD
- 2D Fundamentals
- Preparation of sketches: Lines, Circles, Rectangular etc
- Dimension Style
- Hatch, trim, extend, tables etc

Layers, Blocks, and Object Management

- Layer Overview, modifying layer attributes
- Editing & modification of sketches
- Scaling objects, views
- Duplication using mirror, copy, pattern etc.
- Creating & editing blocks

Dimensioning and Detailing Mechanical Parts

- Dimensioning techniques
- Tolerance symbols, Datum,

Finish, welding symbols etc

Isometric Drawing

- Concept
- Snap
- Drawing Isometric objects
- Dimensioning

AutoCAD 3D

- Introduction to 3D
- Extruding and revolving objects
- UCS concept and it's use
- Boolean using union, subtract and intersect
- Standard views

2) Solidworks Software

Solid Modeling

- Introduction and Interface
- Sketching and Parametric Solid Models
- Features: Extrude, Revolve, Sweep, Loft
- Part Modifications: Fillet, Chamfer, Shell, Draft, and Patterns

Assembly Design

- Creating and Managing Assembly Models
- Defining Assembly Constraints

Surfacing

- Advanced Lofting and Sweeping Techniques
- Surface Modifications and Tweaks

Sheet Metal

- Bend, Jog, Dimple, and Flange Features
- Creating Flat Patterns and Advanced Features

Drafting

- Generative Drafting and Views (Exploded, Section, Detail)
- BOM and Annotations

Animation and Mechanism Design

- Introduction to Product Animation
- Defining Joints and Simulating Product Movements

Extra Features

- File Management and Blueprint Reading
- Applying Tolerances using IS Standards

Choose Any One From These Softwares

1. UG-NX
2. Ansys
3. Creo
4. Inventor
5. Catia
6. Revit MEP

3) NX Software

Introduction to NX Software

- Introduction
- Creating Parts
- Getting parts geometric information

3D Part and Assembly Design:

- Sketcher mode
- Dimensioning
- Sketch planes
- Extruding, Revolving, Sweep features
- Parametric Modeling
- Modifying parts using History
- Adding Fillet, Chamfer,

Receive the following when attending a course at Milestone :

- Placement Support
- Free eBook
- Course Material

Exams and Certifications:

- Government Certified
- Autodesk Certified
- MIT Certified

Who should attend

- Diploma Students
- Mechanical Engineers
- BE / BTech Mechanical Students

Targeted Job Roles

- CAD Engineer
- Product Designer
- Mechanical Design Engineer
- MEP Engineer
- HVAC Design Engineer
- MEP Electrical Engineer
- Fire Protection Engineer
- Building Systems Coordinator



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Prerequisites

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Topics Covered

- Shell and Draft
- Creating Patterns

Assembly Design:

- Creating Assembly Model
- Managing Assembly Models
- Defining Assembly constraints

Generative Drafting

- Plotting various views
- Exploded Views and BOM
- Dimensioning
- Section, Detail and Auxiliary views
- Annotations, Symbols and Datum

Advance Surfacing:

- Creating lofted features
- Creating advance sweep features
- Creating Tweak features
- Modifying features
- Advanced surface modeling

Sheet Metal:

- Introduction to Sheet Metal
- Bend, Jog, Dimple and Flange features
- Hole cut, Lofted Flange features
- Creating Flat Pattern

Advance Features

- Import, Export using UG NX
- UG NX File Management
- Blue Print Reading
- How to apply Tolerances using IS Standards

4) Ansys Software

Introduction to Ansys Software

- Introduction to FEA
- Starting ANSYS Workbench
- Exploring the GUI
- Graphics & Picking

FEA for Stress and Structural Analysis

- **Pre-Processing**
- The Database and Files
- 2D Modeling
- Solid Modeling
- How to Import Geometry
- Material Properties
- Real Constants
- Meshing – Multiple Element Attributes, Controlling Mesh Density
- Mapped Meshing, Hex-to-Tetra Meshing, Mesh Extrusion & Sweep Meshing
- Loads and Boundary conditions

Post-Processing

- Introduction to Solvers
- Read, Write and Plot the Results
- Report Generation
- Animating Result
- File Handling
- Exporting Results to other Post-Processor

Types of Analysis

- Structural Linear Static, Transient
- Structural Non Linear = Time, Material, Contact and Geometric
- Beam Modeling, Beam Meshing, Beam Properties & Loading
- Symmetric boundary conditions
- Buckling Analysis

- Modal Analysis Procedure
- Harmonic Response Analysis
- Vibration
- Thermal Analysis – Steady State & Transient
- Conduction, convection
- Structural Thermal Analysis (Couple Field)
- Goal Driven Optimization

Projects

- Capstone Projects / Live Projects

5) Creo software

Part Design

- Introduction to Creo Software
- Introduction
- Creating Parts
- Getting parts geometric information

3D Solid Modeling

- Sketcher mode
- Dimensioning
- Sketch planes
- Extruding, Revolving, Sweep features
- Parametric Modeling
- Modifying parts using History
- Adding Fillet, Chamfer, Shell and Draft
- Creating Patterns

Assembly Design

- Creating Assembly Model
- Managing Assembly Models
- Defining Assembly constraints

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- MEP Engineer
- HVAC Design Engineer
- MEP Electrical Engineer
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Topics Covered

Drafting:

- Generative Drafting
- Plotting various views
- Defining Assembly constraints

Advance Surfacing:

- Creating lofted features
- Creating advance sweep features
- Creating Tweak features
- Modifying features
- Advanced surface modeling

Sheet Metal:

- Introduction to Sheet Metal
- Bend, Jog, Dimple and Flange features
- Hole cut, Lofted Flange features
- Creating Flat Pattern

Animation:

- Introduction to Animation
- Defining various joints
- Animation Setup
- Animation

Extra Features:

- Import, Export using Creo
- Creo version management
- Blue Print Reading.
- How to apply Tolerances using IS Standards

Course Project

- Real Life Project / Live Project

6) Inventor software

Introduction to Inventor Software

- Introduction
- Creating Parts
- Getting parts geometric

- information

3D Solid Modeling

- Sketcher mode
- Dimensioning
- Sketch planes
- Extruding, Revolving, Sweep features
- Parametric Modeling
- Modifying parts using History
- Adding Fillet, Chamfer, Shell and Draft
- Creating Patterns

Assembly Design

- Creating Assembly Model
- Managing Assembly Models
- Defining Assembly constraints

Drafting

- Generative Drafting
- Plotting various views
- Exploded Views and BOM
- Dimensioning
- Section, Detail and Auxiliary views
- Annotations, Symbols and Datum

Sheet Metal

- Introduction to Sheet Metal
- Bend, Jog, Dimple and Flange features
- Hole cut, Lofted Flange features
- Creating Flat Pattern

Advance Features

- Blue Print Reading
- How to apply Tolerances using IS Standards
- Presentation

Projects

- Capstone Projects / Live Projects

7) CATIA software

Introduction to CATIA Software:

- Introduction
- Creating Parts
- Parts geometric information

3D Solid Modeling:

- Sketcher mode
- Dimension
- Sketch planes
- Pad, Shaft, Multi section, Rib etc features
- Parametric Modeling
- Modifying parts using History
- Adding Fillet, Chamfer, Shell and Draft
- Creating Patterns
- Material

Assembly Design:

- Creating Assembly Model
- Managing Assembly Models
- Defining Assembly constraints

Generative Drafting

- Plotting various views
- Exploded Views and BOM
- Section, Detail and Auxiliary views
- Annotations, Symbols and Datum

Surfacing

- Creating lofted features
- Creating advance sweep features
- Creating Tweak features
- Modifying features
- Advanced surface modeling

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COURSE DURATION

24 Weeks (Regular / Weekend) 1 & ½ Hour

ONLINE / OFFLINE

Yes / Yes

Prerequisites

Basic Computer Skills

Sheet Metal

- Introduction to Sheet Metal
- Bend, Jog, Dimple and Flange features
- Hole cut, Lofted Flange features
- Creating Flat Pattern

Wireframe & Surface Design

- Creating multisection features
- Creating advance sweep features
- Creating features
- Modifying features
- Advanced surface modeling

Advance Features

- Import, Export using UG NX
- UG NX File Management
- Blue Print Reading
- How to apply Tolerances using IS Standards

8) Revit MEP software

Introduction to Revit MEP

- Building Information Modeling (BIM) with Revit MEP
- Overview of the Revit MEP Interface
- Opening a Revit MEP Project
- Viewing Commands

MEP Systems Modeling Basic Drawing and Editing Tools

- General drawing tools
- Editing Revit elements
- Basic modifying tools
- Additional editing tools

Starting Revit MEP Projects

- Starting Revit projects
- Linking Revit models
- Copying and monitoring linked files
- Setting up levels

Views

- Duplicating views
- Adding callout views
- Setting the view display
- Creating elevations
- Creating sections
- Working with ceilings

Systems

- About Revit MEP Systems
- Working with Components
- Creating Systems – Overview
- System Graphics
- Connecting Components
- Analyzing Systems

Spaces and Zones

- Creating spaces
- Creating zones
- Creating color schemes
- Creating Groups

HVAC Design in Revit

- About HVAC systems
- Adding terminals and mechanical equipment
- Adding ductwork
- Creating duct systems
- Automatic ductwork layouts

Electrical Systems Design

- About electrical systems
- Placing electrical components

- Creating electrical circuits
- Cable trays and conduit
- Electrical panel schedules

Plumbing Systems Design

- About plumbing systems
- Adding plumbing fixtures
- Drawing piping for plumbing systems
- Working with plumbing systems

BIM Coordination

Construction Documents

- Setting up sheets
- Placing and modifying views on sheets
- Printing sheets

Annotating Construction Documents

- Working with dimensions
- Working with text
- Adding detail lines and symbols
- Creating legends

Tags and Schedules

- Adding tags
- Working with schedules
- Creating schedules

Detailing

- Setting up detail views
- Creating details
- Annotating details
- Patterning

Projects

- Capstone Projects / Live Projects

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