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CADD TRAINING

DIGITAL MARKETING

IT SOFTWARES TRAINING

# COURSES AVAILABLE IN THIS BROCHURE


**MECHANICAL BROCHURE** 3-14

- AUTOCAD
- SOLIDWORKS
- CATIA
- NX CAD/UNIGRAPHICS
- CREO
- ANSYS
- HYPERMESH
- GD&T
- NC CAM
- MASTER CAM

**CIVIL CADD BROCHURE** 15-32

- AUTOCAD
- REVIT ARCHITECTURE
- REVIT STRUCTURE
- REVIT MEP
- 3DS MAX
- TRIMBLE SKETCHUP
- V-RAY
- ENSCAPE
- E-TABS
- STAAD PRO
- ORACLE PRIMAVERA
- DYNAMO
- ESTMATION COSTING

**BIM BROCHURE** 33-35

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# MECHANICAL CADD

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## About JNANA INFOTECH

**JNANA INFOTECH**, a prestigious training institute with a decade-long legacy of excellence. For ten remarkable years, we have been dedicated to providing exceptional training and unwavering placement assistance to our students. At JNANA INFOTECH, we understand the importance of equipping our students with the skills and knowledge that align with industry standards. Our commitment to delivering top-notch, industry-related training sets us apart. We believe that by bridging the gap between academia and the professional world, we empower our students to confidently embark on their career journeys.

What sets us apart is our unwavering dedication to delivering the highest quality of training. We have carefully curated a team of experienced instructors who are experts in their respective fields. They emplo innovative teaching methodologies, ensuring an engaging and transformative learning experience for our students.

We take pride in our comprehensive placement assistance program. Our extensive network of industry connections allows us to guide our students towards exciting career opportunities. We assist them in preparing for interviews, polishing their resumes, and developing essential professional skills. Our goal is to empower our students to shine and secure positions in top-tier companies, setting them on a path to succe

# Our MODEL

### Educate

A periodiclearningona regular basis, helps in more adoption of contents by human brain, daily assignments based on the topic covered for maximum attention during training.

### Enable

aLinvde ipnrtoejrencsthsip enables participants to learn and adapt professional values, experience and practice empower students to gain much needed software skills.

### Employ

Certifiedcandidates with overall performance o f > 80 % gets opportunity to give interview sin software companies.>95% performance smoothens the possibility of direct appointment with software companies.

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## AutoCAD

**Overview:** AutoCAD is a 2D and 3D CAD software which is used for drafting.

## Key Contents

2D Topics

- Types of view
- Angle of projection
- Unit setup, limit setup, degrees of freedom & drafting settings
- Functional keys
- Basic tool menu
- Drawing tools
- Modifying tools
- Object properties
- Annotation tools
- Isometric drawing
- GD & T

3D Topics

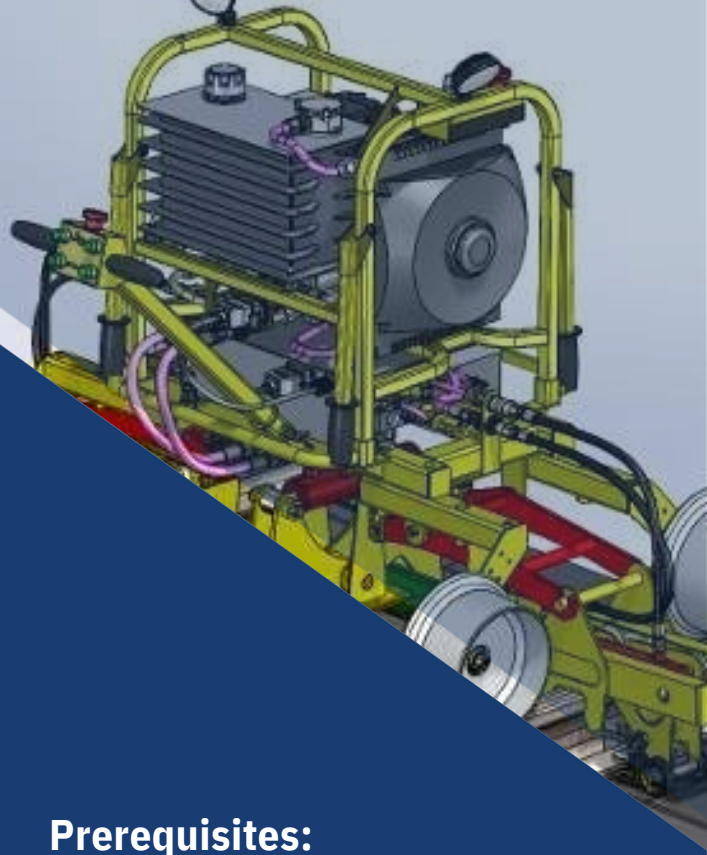
- Introduction to 3D workspace
- Solid Primitive
- Solid Modelling

## Prerequisites:

This course is designed for beginners, and help CAD professionals improve their skill sets, Basic understanding of engineering design, Formal education (ITI / Diploma / Degree) in a relevant engineering stream

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## Solid Works

**Overview :**
**SolidWorks software is used for creating 3D models, 2D drawings and product simulations.**

## Key Contents

- Sketch Entities
- Sketch Tools
- 2D Sketches
- Part Modelling Tools
- Creating Revolve Features
- Creating Swept Features
- Creating Patterns
- Creating Assembly by Using Parts
- Surface Modelling Tools
- Creating Surface Model by Using Isometric and Orthographic View
- Generating Drawing Views
- Creating Dimensions
- Inserting Annotations
- Creating Manufacturing and Assembly Drawings
- Sheet Metal Design
- Creating Sheet Metal Parts by Using Isometric & Orthographic Views

**Work Benches:**

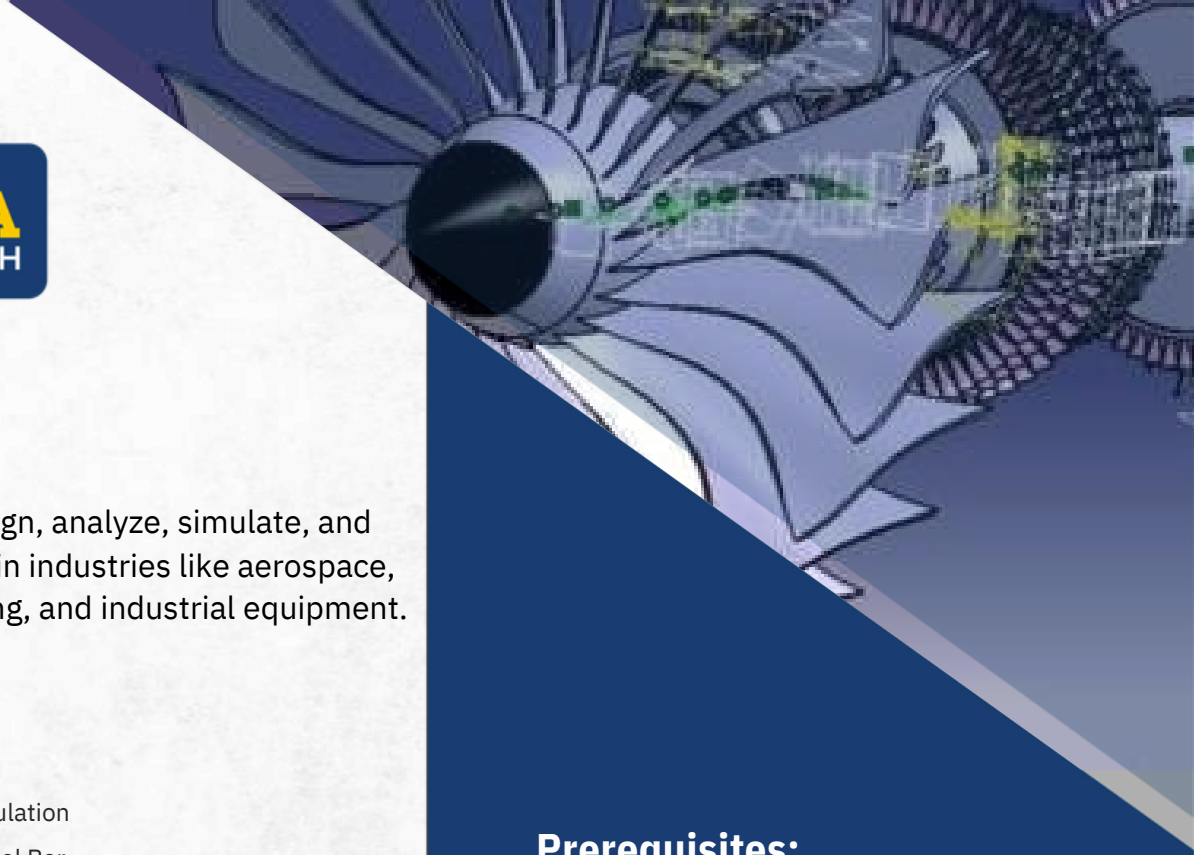
- Sketcher
- Part Modelling
- Assembly
- Drafting
- Sheet Metal
- Surface

## Prerequisites:

Basic understanding engineering design. Leaners from Mechanical, production, automobile and aerospace are most suited for this program. Aspiring and working professionals looking for upgrading their 3D design and solid modelling skills can take up this program.

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# Catia V5

## Overview

Catia V5 is used to design, analyze, simulate, and manufacture products in industries like aerospace, automotive, shipbuilding, and industrial equipment.

## Key Contents

- Introduction to Catia V5
- Understanding View Manipulation
- Understanding Standard Tool Bar
- Introduction to Sketcher
- Profile Creating
- Creating Construction/Standard Element
- Applying Geometrical/Dimensional Constraints
- Introduction to Part Design
- 2D to 3D Drawing
- Isometric and Orthographic Drawings
- Assembly Design
- Sheet Metal Design
- Stamping Operations
- Transformation Operations
- Wireframe and Surface Design
- Drafting
- Projection Views
- Dimensioning and Annotations

**Work Benches:**

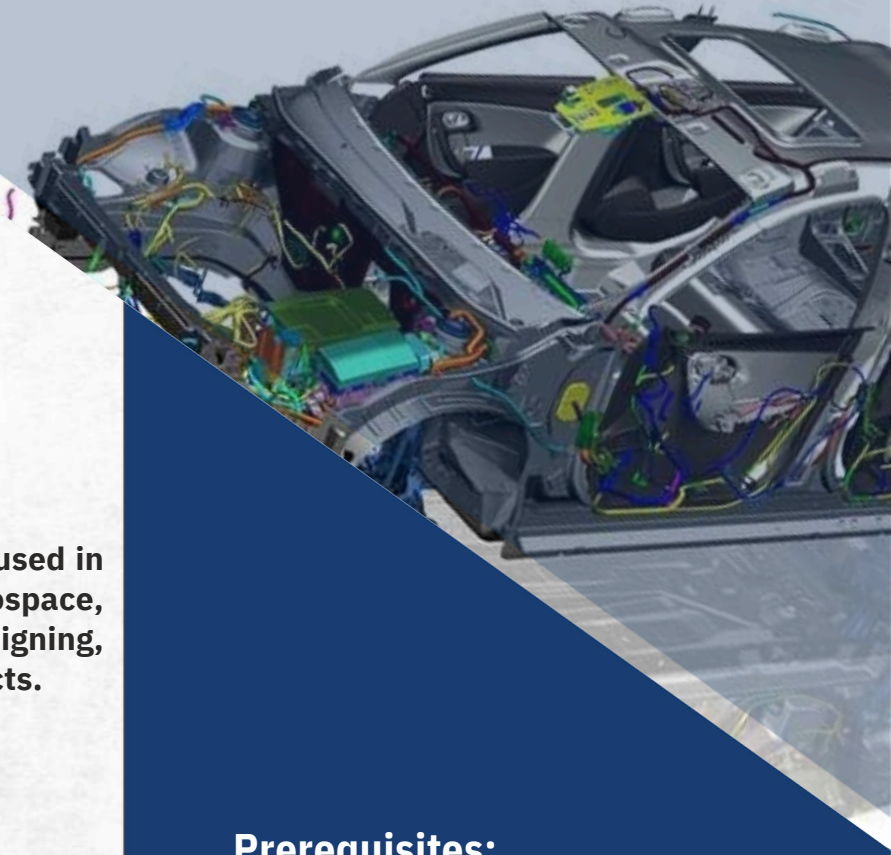
- Sketcher
- Part Modelling
- Assembly
- Drafting
- Sheet Metal
- Surface

## Prerequisites:

Basic understanding engineering design. Leaners from Mechanical, production, automobile and aerospace are most suited for this program. Aspiring and working professionals looking for upgrading their 3D design and solid modelling skills can take up this program.

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## NX Cad/ Unigraphics

**Overview : UGNX (Siemens NX) is widely used in industries like automotive, aerospace, shipbuilding, and manufacturing for designing, simulating, and producing complex products.**

## Key Contents

- Introduction to Unigraphics (UGNX)
- User Interface
- Sketcher Essentials
- Constraining & Managing Sketches
- Datums
- Creating Part Features
- Editing Parts
- Knowledge Fusion
- Creating/Editing Fundamental Curves and Freeform Features
- Assembly Concepts & Sequencing
- Part Families
- Drafting & Plotting
- Sheet Metal Techniques
- Surface
- GD&T Symbols

**Work Benches:**

- Sketcher
- Part Modelling
- Assembly
- Drafting
- Sheet Metal
- Surface

## Prerequisites:

Basic understanding engineering design. Leaners from Mechanical, production, automobile and aerospace are most suited for this program. Aspiring and working professionals looking for upgrading their 3D design and solid modelling skills can take up this program.

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# Creo

**Overview**

Creo is used for product design, engineering, and manufacturing. It allows designers and engineers to create precise 3D models, 2D drawings, and simulations for industries like automotive, aerospace, manufacturing, and consumer products.

## Key Contents

- Introduction of Creo
- Sketcher Tools & File Commands
- Operations & Constraints
- Datum Feature
- Part Design
- Extrude, Revolve
- Rounds, Chamfers, Drafts
- Ribs, Holes, Shells
- Blends & Sweeps
- Variable Sections & Helical Sweep
- Pattern & Parameters
- Assembly
- Sheet Metal Design
- Surface Features
- Drafting

**Work Benches:**

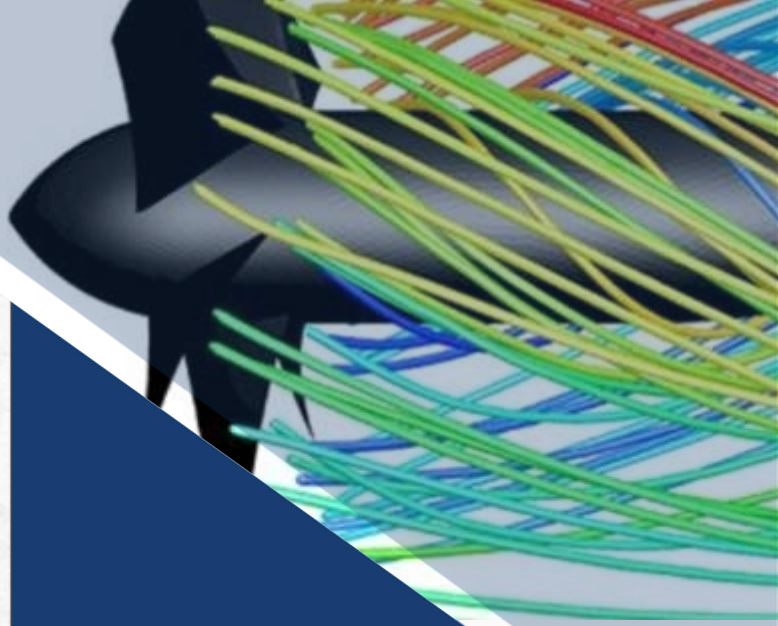
- Sketcher
- Part Modelling
- Assembly
- Drafting
- Sheet Metal
- Surface

## Prerequisites:

Basic understanding engineering design. Leaners from Mechanical, production, automobile and aerospace are most suited for this program. Aspiring and working professionals looking for upgrading their 3D design and solid modelling skills can take up this program.

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## Ansys

**Overview :** Ansys is a leading engineering simulation software used for product design, testing, and optimization.

## Key Contents

- Finite Element Analysis (FEA)
- Computational Fluid Dynamics (CFD)
- Electromagnetic Analysis
- Multi-Physics Simulation
- Optimization Tools
- User-Friendly Interface

## Prerequisites:

Certification program in ANSYS will empower students to be part of the industry and enable them to produce better products. Our highly skilled mentors will extend their expertise to meet students learning and course requirements.

This course is suitable for beginner with good knowledge on FEM and for aspiring professionals with little or no experience. Also, it is highly recommended for anyone who has a passion for a career in designing or Analysis.

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## Hypermesh

**Overview :** Altair HyperMesh is a high-performance finite element analysis (FEA) pre- and post-processor that serves as the model-building foundation in the Altair HyperWorks simulation ecosystem.

## Key Contents

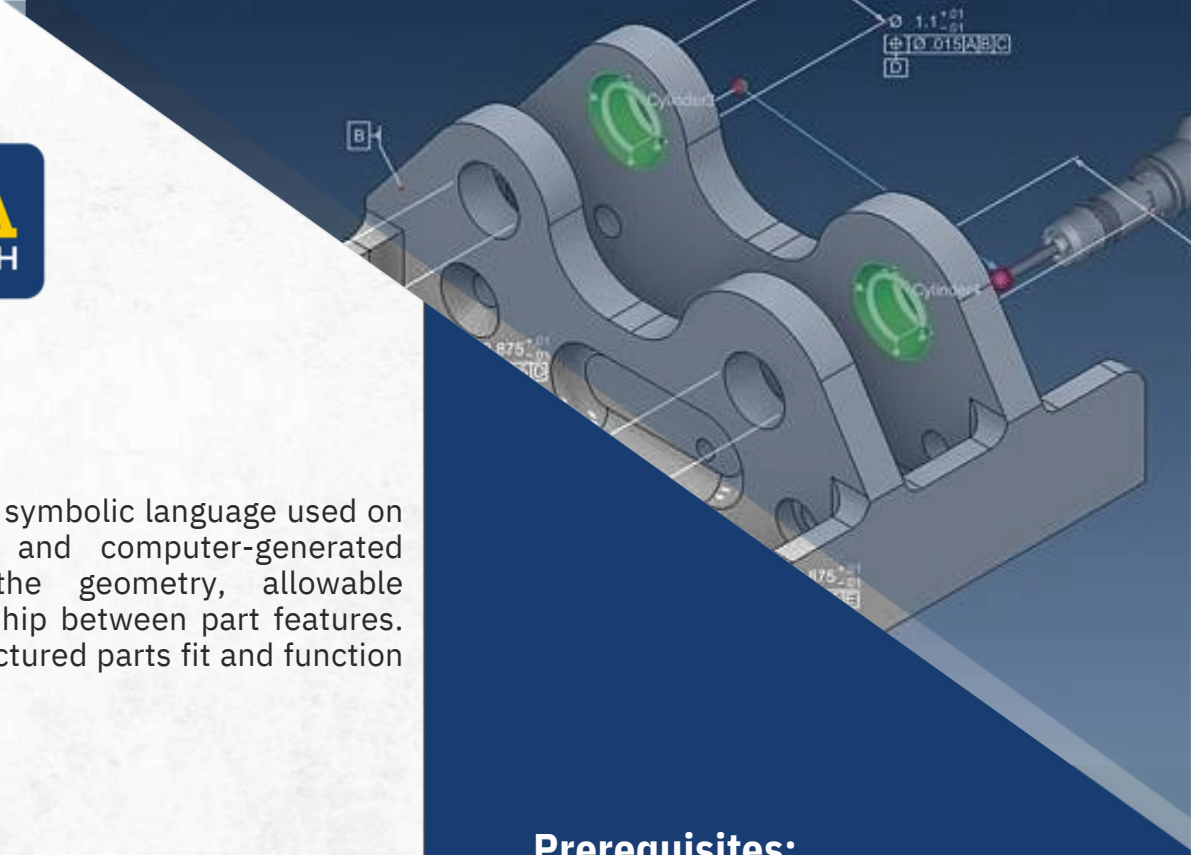
- Advanced Mesh Generation and Editing
- Model Build & Assembly Management
- Solver Interface & Export
- AI-Augmented and Automated Workflows
- Customization & Automation
- Integrated Pre/Post Workflow

## Prerequisites:

This course is suitable for beginner and aspiring professionals with little or no experience. Also, it is highly recommended for anyone who has a passion for a career in designing or Analysis.

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## GD & T

**Overview :** GD & T is a symbolic language used on engineering drawings and computer-generated models to define the geometry, allowable variation, and relationship between part features. It ensures that manufactured parts fit and function properly in assemblies.

## Key Contents

- Introduction to Geometric Dimensioning and Tolerancing (GD&T)
- Importance and Applications of GD&T in Mechanical Design
- Understanding Tolerance, Allowance, and Fit
- Datum Reference Frames and Feature Control Frames
- Types of Tolerances:
- Form Tolerances (Straightness, Flatness, Circularity, Cylindricity)
- Orientation Tolerances (Perpendicularity, Parallelism, Angularity)
- Location Tolerances (Position, Concentricity, Symmetry)
- Runout Tolerances (Circular Runout, Total Runout)
- GD&T Symbols and Terminology
- Interpreting Engineering Drawings with GD&T
- Symbols
- Applying GD&T in 2D and 3D CAD Models
- Relationship Between GD&T and Manufacturing
- Processes
- Inspection and Measurement Techniques for GD&T

## Prerequisites:

This course is suitable for beginner and aspiring professionals with l ittle or no experience. Also, it is recommended for anyone who has a passion for a career in designing. GD&T facilitates and simplifies gaging requirement. As GD&T iswidely used in drawings, it is a must learn for anyone looking for a career in Design.

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## NX CAM

**Overview :** NX CAM is an advanced manufacturing module of Siemens NX software that provides a complete solution for computer-aided manufacturing. It allows engineers and machinists to program, simulate, and optimize CNC machining operations directly from 3D models, ensuring high precision and productivity in manufacturing processes.

## Key Contents

- Introduction to NX CAM Interface
- Understanding CAM Fundamentals
- Toolpath Generation and Machining Strategies
- Workpiece, Fixture, and Tool Setup
- Tool Library and Tool Selection
- Machining Methods:
  - Facing, Pocketing, and Contouring
  - Drilling, Tapping, and Boring
  - 2-Axis and 3-Axis Machining
  - 4-Axis and 5-Axis Simultaneous Machining
- Turning Operations and Mill-Turn Programming
- Post-Processing and NC Code Generation
- Simulation and Verification of Toolpaths
- Collision Detection and Optimization
- Introduction to Advanced Manufacturing Concepts:
  - High-Speed Machining (HSM)
  - Adaptive Milling
  - Multi-Part Setup Programming
- Toolpath Editing and Process Customization

Work Benches / Modules:

- Manufacturing (CAM Environment)
- Tool Path Simulation
- Post Processor
- Geometry Setup
- Operation Navigator

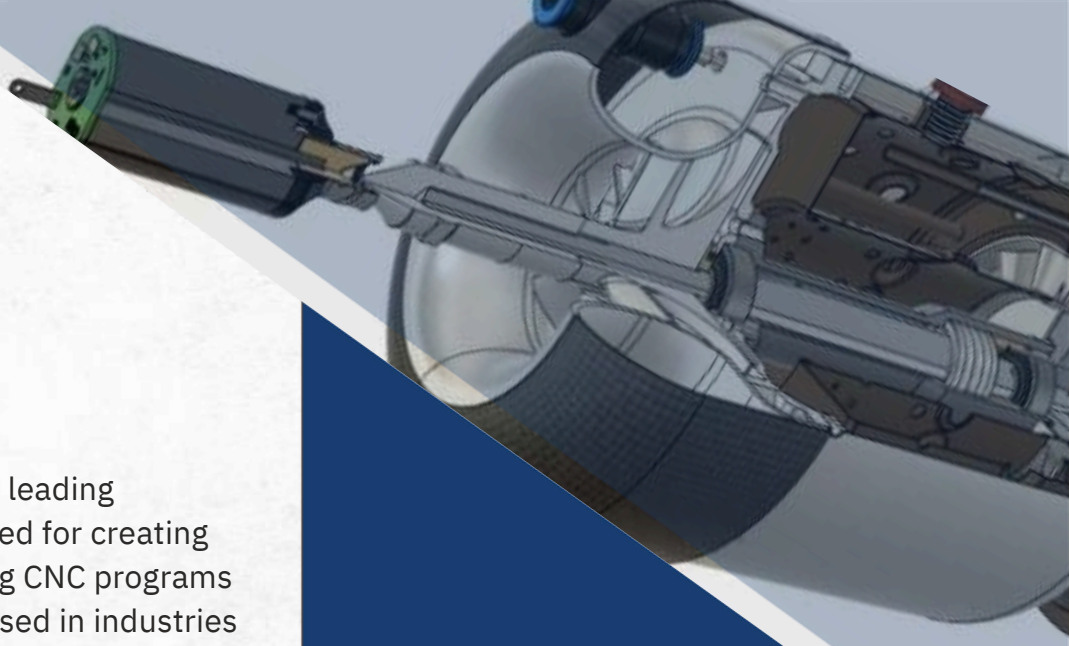
## Prerequisites:

This course is suitable for beginner with bas knowledge on CAM and for aspiring professionals with little or no experience. Also, it is highly recommended Manufacturing engineers, Tool Designers, Machine/Robotics programmers, Administrators and for anyone who has
a passion for a career in manufacturing.

## Duration : 80 Hs

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# Master cam

**Overview :**

Mastercam is one of the world's leading CAD/CAM software solutions used for creating precise toolpaths and generating CNC programs for manufacturing. It is widely used in industries such as automotive, aerospace, and tooling for milling, turning, wire EDM, and router machining applications.

## Key Contents

- Introduction to Mastercam Interface and Environment
- Understanding Coordinate Systems and Work Offsets
- Geometry Creation and Editing Tools
- 2D Machining Operations:
  - Contour, Pocket, and Drilling
  - Facing, Slotting, and Thread Milling
- 3D Machining Operations:
  - Surface Roughing and Finishing
  - High-Speed Machining (HSM)
  - Dynamic Toolpaths
- Multi-Axis Machining:
  - 4-Axis and 5-Axis Machining
  - Rotary and Simultaneous Toolpaths
- Turning and Mill-Turn Operations
- Toolpath Simulation and Verification
- Post Processor Setup and NC Code Generation
- Tool Library and Parameter Optimization
- Importing Models from CAD Software (SolidWorks, NX, CATIA)
- Understanding G & M Codes for CNC Programming

Work Benches / Modules:

- Design (CAD Environment)
- Mill (2D, 3D, Multi-Axis)
- Lathe (Turning)
- Router
- Wire EDM
- Simulation and Verification

## Prerequisites:

- Learn to create, edit, and manage machining toolpaths for CNC operations.
- Understand and apply different milling and turning strategies.
- Generate optimized NC codes for various machines.
- Gain hands-on experience in 2D, 3D, and multi-axis machining processes.

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# CIVIL CADD




# AutoCAD

**Overview :**
AutoCAD is a 2D and 3D CAD software used for drafting and design in civil and architectural engineering.

**Key Contents :**

**2D Topics:**

- Building Plannings
- Vastu Concepts
- Front Elevation
- Section
- Coordinate Systems
- Types of Views
- Functional Keys
- Drafting Settings
- Drawing Tools
- Modifying Tools
- Annotation Tools
- Shortcut Keys of Commands
- Isometric Drawing

**3D Topics:**

- Elevation
- 3D Modeling
- Exterior Models
- 3D Drawing Tools

**Prerequisites:**
Priorexperience on CAD is not a prerequisite. The course is designed to get you up & running with AutoCAD quickly by teaching you the things you need to know. You need to have basic computer knowledge.



# Revit Architecture

Overview :

Revit Architecture software is used by architects and designers to create 2D and 3D architectural designs.

## Key Contents :

**Exterior Design:**
- Building Designs (Exterior)
- Placing Doors, Windows, Columns
- Creation of Model (Gopura)
- Roof Design
- Ceiling Design
- Floor Design
- Railing & Staircase

**Rendering Design:**
- Day View Render
- Night View Render
- Walkthrough
- Setting up of Camera
- Setting up of Material Properties

**Lightings:**
- Interior Light
- Exterior Light
- Setting up of Both Types of Light

## Prerequisites:

RevitArchitecturetraining course is suitable for architects, civil/Arch engineering students & professionals, interior designers and Auto CAD draftsmen pursuing Revit BIM jobs. Working knowledge on architectural design, drafting and other engineering experience are recommended.



# Revit Structure

**Overview :**

Revit Structure is a version of Revit focused on structural design and detailing.

**Key Contents :**

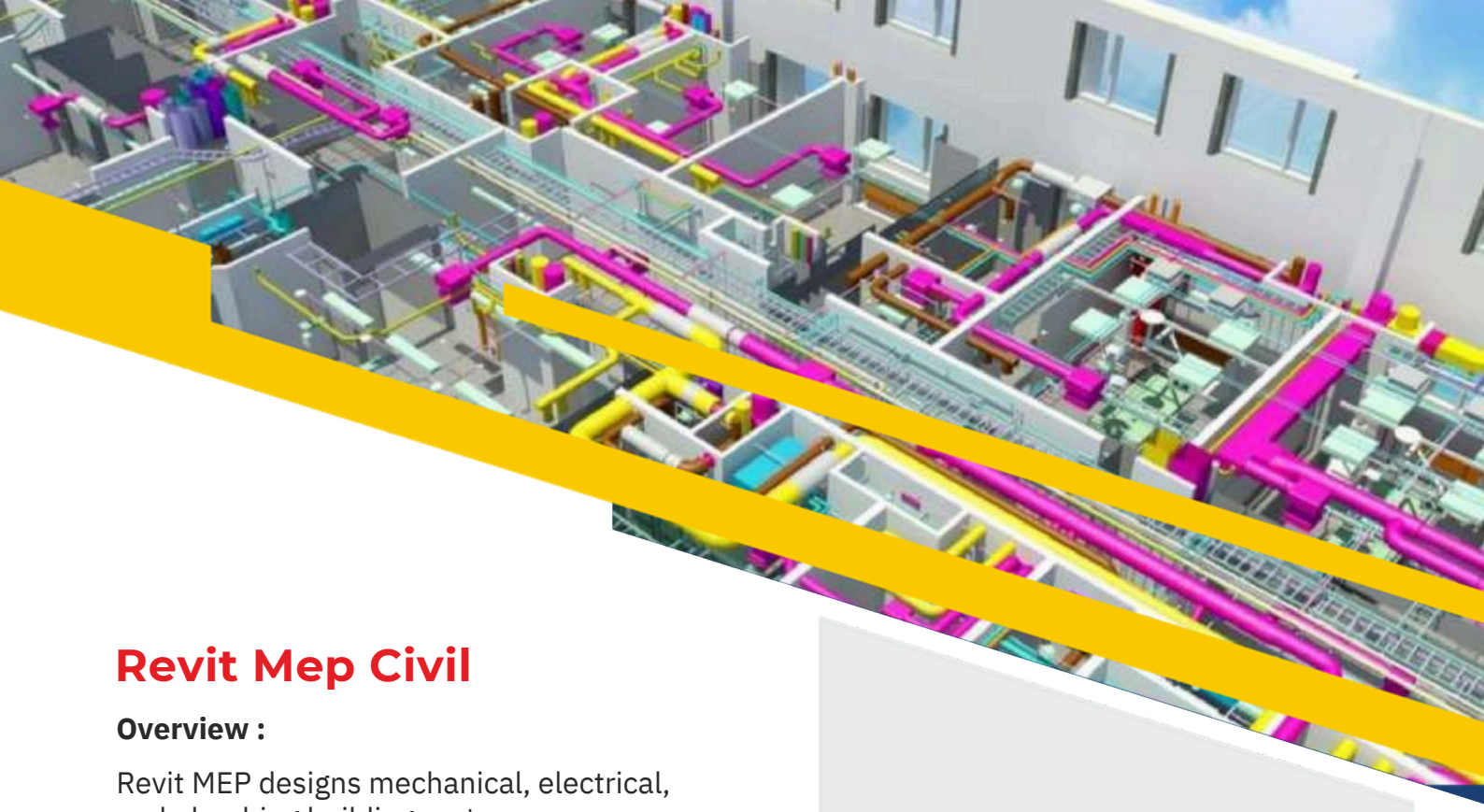
- Introduction to BIM
- Drawing Tools
- Modifying Tools
- Structural Projects
- Structural Grids and Columns
- Foundation
- Structural Framing
- Working with Views
- Structural Reinforcement
- Structural Analysis
- Concrete Structure
- Creating Construction Documents
- Creating Details & Scheduling

**Final Project:**

Students will design and document a complete structural model in Revit.

Prerequisites:

Candidates with good knowledge in AutoCAD and with an exposure to construction sites. This course is designed to get you up & running with Revit Structure by teaching you the things you need to know as a structural engineer.



# Revit Mep Civil

**Overview :**

Revit MEP designs mechanical, electrical, and plumbing building systems.

**Key Contents :**

- Creating an Effective Project Template Worksets and Work
- Sharing Schedules HVAC
- Cooling and Heating Load
- Analysis Mechanical Piping Lighting and Plumbing &
- Creating Lighting Fixtures Fire
- Protection Solid Modeling Creating Symbols and
- Annotations Creating
- Equipment & Parameters
-

-

**Prerequisites:**

Thetrainingcourse introduces the fundamental skills in learning the Autodesk Revit MEP software. It is highly recommended for those having experience and knowledge in MEP engineering and i ts terminology.

**Final Project:**

Design a complete MEP system with HVAC, lighting, and plumbing components using Revit MEP.



# 3ds Max Design

**Overview** :

3ds Max is used for advanced 3D modeling, animation, and rendering, particularly in architecture and interior design.

## Key Contents :

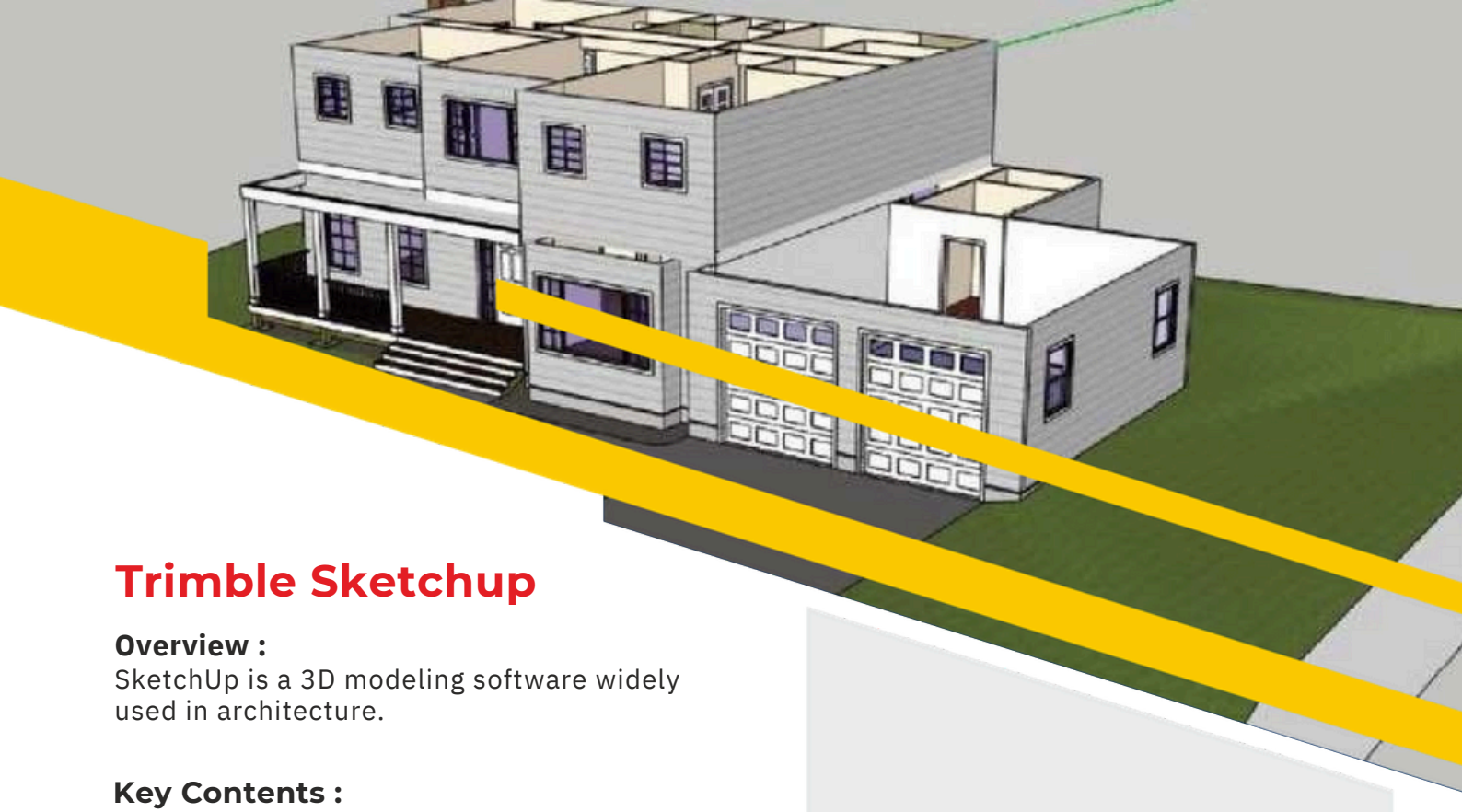
- Creation of Furniture & TV Unit
- Modifiers Extended Primitives
- Geometrical 3D Object Making of 3D
- Modeling 3D Boolean and 2D
- Boolean Creation of Walls, Door,
- Windows Importing AutoCAD
- Models Light Setting Types of
- Camera Camera Walkthrough
- Camera Setting Particles and
- Dynamics Concepts of Rendering &
- Properties Creating Still Images
-
-
-
-

## Final Project:

Develop a complete 3D interior model and produce a rendered walkthrough animation.

## Prerequisites:

Priorexperience on CAD is not a prerequisite. The course is designed to get you up & running with AutoCAD quickly by teaching you the things you need to know. You need to have basic computer knowledge.



# Trimble Sketchup

**Overview :**
SketchUp is a 3D modeling software widely used in architecture.

**Key Contents :**

**Interior Designs:**
- Drawing Tools
- Modifying Tools
- Furniture
- Kitchen Design
- Bedroom Design
- Hall Design
- Types of Staircase
- Furniture Modeling
- Ceiling (POP) Design

**Exterior Designs:**
- Front Elevation
- Exterior Rendering
- Exterior Lighting

**Final Project:**
Students will design a complete interior or exterior 3D model demonstrating all learned tools and concepts.

Prerequisites:

This course isdesigned for individuals who wish to pursue their career in the eld of 3D modelling. Professionals who are already in this eld can have a huge bene t with this training. SketchUp course will help them in developing and creating advanced 3d models using the tools and 3 D warehouse associated with the program.



# V-ray

**Overview :**

High-quality photo-realistic rendering plug-in for 3D software.

**Key Contents :**

- Material Creation
- Modification of Material
- V-Ray for Lights
- Different Types of Lights
- Creation of Fur Material
- Modification of Fur Material
- Removal of Material

**Final Project:**

Students will design a complete interior or exterior 3D model demonstrating all learned tools and concepts.

Prerequisites:

Thiscourseis ideal for the professionals who work as Architects, Graphic Designers, Interior Designers, and Game Developers and students having an interest in learning more about the rendering technology



# Lumion

**Overview :**

Real-time 3D rendering software for architectural visualization.

**Key Contents :**

- Lumion Introduction
- Home Library
- Material Library
- Landscape and Environment
- Photo Creation
- Video Creation
- Mass Moving

**Final Project:**

Render a 3D walkthrough or visualization of an architectural project using Lumion.

**Prerequisites:**

This courseissuitable for beginner with good knowledge on CAD/CAM and for aspiring professionals with little or no experience. Also it is highly recommended for anyone who has a passion for a career in designing or production.



# Enscape

**Overview :**

Enscape is a real-time rendering and visualization software designed for architects, designers, and visualization professionals.

**Key Contents :**

- Real-time Rendering
- Photorealistic Visualizations
- Virtual Reality (VR) Experience
- Walkthroughs and Flythroughs
- Landscape and Site Design
- Collaborative Design Review
- Time-of-Day Settings
- Rendering and Output Options
- Material and Asset Library

**Final Project:**

Create a real-time photorealistic walkthrough using Enscape visualization tools.

Prerequisites:

Civil engineers, who wish to learn the Road Design and Analysis Software, and the use of MXROAD for an inter active 3D modeling of roadways.



# Etabs

**Overview :**

ETABS is a structural analysis and design software for multi-story building systems.

**Key Contents :**

- Introduction to GUI, Unit Setup, Grid Setup, Stories Setup
- Modeling of Regular and Irregular Buildings Modeling of Overhead
- Tank Modeling of Truss Modeling
- of Staircase Load Assigning Types
- of Loads Assigning Wind and
- Earthquake Loads Design of Beam
- Simple Frame Design
-
-
-

**Final Project:**

Students will complete the design and analysis of a multi-story structure using ETABS.

Prerequisites:

This course is most suited for civil engineers, architects and designers, engineering students and professionals. Basic knowledge on CAD and fundamentals of structural engineering a must for all looking for this program.



# Staad Pro

## Overview :

STAAD Pro is a widely used software application for structural analysis and design.

## Key Contents :

- Coordinate Systems, Units & Project Setup
- Model Generation
- Model Editing Tools
- Structure Wizard & Support
- Load Definition & Types
- Floor & Wind Loads
- Analysis Introduction
- Concrete Design
- Steel Design
- Plate Load Types
- Slab and Stair Design

## Final Project:

Students will complete a structural analysis and design project using STAAD Pro.

## Prerequisites:

Thiscourseismost suited for civil and structural engineering students and professionals. Learners need to have fair idea about materials being used in building construction.



# Oracle Primavera

**Overview :**

Primavera P6 is a project management software used for scheduling and resource management in construction projects.

**Key Contents :**

- Project Planning
- Enterprise Project Structure (EPS)
- Work Breakdown Structure (WBS)
- Organizational Breakdown Structure (OBS)
- Calendars
- Creation & Sequencing
- Documents & Work Products
- Currency Settings
- Cost Estimation
- Resource Analysis
- Tabular Reports
- Graphical Reports & Gantt Charts
- Global Change
- Methodology Management

**Final Project:**

Students will complete a structural analysis and design project using STAAD Pro.

Prerequisites:

Theidealaudience for this course include Structural and Project Engineers,Higher-level, more hands-off positions such as project management provide engineers with the opportunity to continue working directly on engineering projects while gaining importantly, skills offering and, you the chance to move up in your eld.




# BIM 360

**Overview :**

AutoCAD is a 2D and 3D CAD software used for drafting and design in civil and architectural engineering.

## Key Contents :

**2D Topics:**

- Building Plannings
- Vastu Concepts
- Front Elevation
- Section
- Coordinate Systems
- Types of Views
- Functional Keys
- Drafting Settings
- Drawing Tools
- Modifying Tools
- Annotation Tools
- Shortcut Keys of Commands
- Isometric Drawing

**3D Topics:**

- Elevation
- 3D Modeling
- Exterior Models
- 3D Drawing Tools

## Final Project:

AutoCAD is a 2D and 3D CAD software used for drafting and design in civil and architectural engineering.

## Prerequisites:

Professionals with experience in managing projects within built environment including quantity surveyors, project managers, building surveyors, asset managers, Facilities Manager, Architects and Engineers, Cost Engineers, BOM Manager, BIM coordinator and Construction Project Managers are most suited for this program




# Dynamo

## Overview :

Dynamo is a visual programming tool integrated with Autodesk Revit that allows designers, engineers, and BIM professionals to automate repetitive tasks, optimize workflows, and create intelligent parametric designs without the need for traditional coding.

## Key Contents :

- Introduction to Dynamo Interface and Environment
- Understanding Nodes, Wires, and Data Flow
- Creating and Managing Workspaces
- Working with Lists and Data Structures
- Geometry Creation and Manipulation
- Parametric Modeling and Automation in Revit
- Linking Revit Elements with Dynamo
- Customizing Revit Families using Dynamo Scripts
- Conditional Statements and Loops in Workflows
- Integration of Dynamo with Excel for Data Exchange
- Practical Applications in BIM Coordination
- Structural and MEP Automation Workflows
- Creating Dynamo Packages and Custom Nodes
- Real-world Automation Case Studies in Civil and Architectural Projects

## Final Project:

Develop a complete automation script in Dynamo for a Revit project — automating tasks such as scheduling, quantity extraction, or model updates to improve BIM efficiency.

## Prerequisites:

Theidealaudience for this course include Structural and Project Engineers,Higher-level, more hands-off positions such as project management provide engineers with the opportunity to continue working directly on engineering projects while gaining importantly, skills offering and, you the chance to move up in your eld.



# Navisworks

## Overview :

Project review software for 3D coordination and clash detection.

## Key Contents :

- Introduction to Navisworks
- Interface and Navigation File
- Import and Model Aggregation
- Detection and Coordination
- Timeliner – 4D Simulation
- Animation and Rendering
- Collaboration and Review

## Final Project:

Conduct a 3D project coordination and clash detection review using Navisworks.

## Prerequisites:

Theidealaudience for this course include Structural and Project Engineers,Higher-level, more hands-off positions such as project management provide engineers with the opportunity to continue working directly on engineering projects while gaining importantly, offering you the chance to move up in your eld.



# Estimation and Costing

## Overview :

Estimation and Costing calculates material quantity and overall project cost.

## Key Contents :

- Basics of Construction
- Structural Elements & Layout
- Reinforcement Details
- Brick Bonds
- Bar Bending Schedule
- Types of Walls
- Estimation & Costing of Building
- Calculates Material Required for Construction

## Final Project:

Conduct a 3D project coordination and clash detection review using Navisworks.

## Prerequisites:

Estimation andcosting is an essential part of building construction and accurate forecasting the cost of future projects is an important skill for civil engineers and cost estimators. This course is designed for individuals who wish to pursue their career in their eld, Cost estimation. Skilled QTO professionals are in high demand with construction industry. This course is engineers. professionals are in high demand with construction industry. This course is most suited for civil engineers.



# Microsoft Project with PPM C oncepts

## Overview :

Microsoft Project is a powerful project management software used for planning, scheduling, and tracking projects. With integrated Project Portfolio Management (PPM) concepts, it helps project managers effectively manage multiple projects, allocate resources, control costs, and monitor performance in real time.

## Key Contents :

- Introduction to Microsoft Project Interface and Navigation
- Creating and Managing Project Calendars
- Defining Tasks and Milestones
- Setting Task Dependencies and Constraints
- Resource Allocation and Leveling
- Cost Estimation and Budgeting
- Tracking Project Progress with Gantt Charts
- Critical Path Method (CPM) Analysis
- Managing Baselines and Variance Analysis
- Generating and Customizing Reports
- Earned Value Management (EVM)
- Overview of Project Portfolio Management (PPM)
- Integrating Multiple Projects under PPM
- Resource Sharing and Centralized Resource Pool
- Performance Analysis and Risk Management

## Final Project:

Plan, schedule, and track a complete civil project using Microsoft Project with PPM integration — including timelines, cost control, and performance monitoring .

### Prerequisites:

Theidealaudience for this course include Structural and Project Engineers,Higher-level, more hands-off positions such as project management provide engineers with the opportunity to continue working directly on engineering projects while gaining importantly, skills offeringd, you the chance to move up in your eld.

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# BIM



# BIM

The BIM (Building Information Modeling) course trains students to create and manage 3D building models using software like Revit, AutoCAD, and Navisworks. Learn design, planning, collaboration, and clash detection skills for efficient project execution and career opportunities in architecture, engineering, and construction.

## Courses we Cover

- autocad
- Revit architecture
- structure
- mep
- dynamo
- Naviswork
- BOQ (estimation & costing)
- BIM 360

## Key Contents :

- AutoCAD
  - 2D Drafting and Annotation
  - 3D Modeling and Rendering
  - Layers, Blocks & Templates
  - Layouts and Plotting Techniques
  - Industry-based Projects
- Revit Architecture
  - BIM Fundamentals & Interface
  - Walls, Doors, Windows & Roofs
  - 3D Visualization & Rendering
  - Scheduling & Documentation
  - Family Creation & Project Collaboration

Prerequisites:

- PBasic knowledge of architecture, civil engineering, or construction concepts.
- Familiarity with computer operations and CAD software is helpful.
- Understanding of drawing and design principles is an advantage.
- No prior BIM experience is required; beginners can enroll.

Course Objective :

TheBIM (BuildingInformation Modeling) course provides hands-on training in creating, managing, and analyzing 3D building models using software like Revit, AutoCAD, and Navisworks. Learn efficient design, planning, collaboration, and clash detection techniques to excel in architecture, engineering, and construction projects. Gain practical skills for modern digital construction workflows and career-ready expertise.



- Revit Structure
  - Structural Grids & Levels
  - Columns, Beams & Foundations
  - Rebar Modeling & Detailing
  - Structural Analysis Tools
  - Coordination with Architecture & MEP
- Revit MEP
  - HVAC, Electrical & Plumbing Systems
  - Duct, Pipe & Cable Tray Design
  - Energy Analysis Tools
  - Clash Detection & Coordination
  - Real-time BIM Collaboration
- Dynamo
  - Visual Programming Interface
  - Automating Revit Workflows
  - Parametric Design Concepts
  - Custom Node Creation Design
  - Optimization with Scripts
- Navisworks
  - BIM Model Integration
  - Clash Detection & Resolution
  - 4D Construction Simulation
  - Model Review & Animation
  - Project Coordination & Management
- BOQ (Estimation & Costing)
  - Quantity Takeoff from Revit Models
  - Cost Estimation & Rate Analysis
  - Budgeting & Cost Control
  - Report Generation
  - Integration with Excel Tools
- BIM 360
  - Cloud-based Project Collaboration
  - Model Sharing & Coordination
  - Issue Tracking & Review
  - Document & Quality Management
  - Real-time Team Integration

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Are you ready ?

## WE PROVIDE PLACEMENT BACKED SKILL TRAINING