



**QUILLANCE
INFOTECH PVT LTD.**

Quillance AutoCAD Mechanical Program

The Quillance AutoCAD Mechanical Program is a complete beginner-to-advanced training program designed to help learners master mechanical drafting, 2D & 3D design, engineering drawings, product modeling, industrial drafting standards, and mechanical design workflows used in manufacturing, automotive, and engineering industries worldwide.



Program Overview

What You Will Learn

- Understand engineering drawing and mechanical drafting concepts
- Learn 2D drafting and 3D mechanical modeling techniques
- Create industrial and manufacturing design layouts
- Understand dimensions, tolerances, and assembly drawings
- Work with mechanical design standards and workflows
- Build real-world engineering and product design projects

Career Opportunities

After completing this program, learners can apply for roles such as:

- AutoCAD Mechanical Designer
- CAD Draftsman
- Mechanical Design Engineer
- Product Design Associate
- Manufacturing Design Technician
- CAD Engineering Intern

Live Projects You'll Build

- **Project 1 – Mechanical Component Drafting**

Create engineering drawings for mechanical machine components.

- **Project 2 – Industrial Equipment Layout Design**

Design industrial machine layouts and mechanical structures.

- **Project 3 – 3D Product Modeling Project**

Develop 3D models of mechanical products and assemblies.

- **Project 4 – Automotive Mechanical Design**

Create automotive part drawings and assembly systems.

- **Project 5 – Manufacturing Assembly Design**

Build production-ready assembly and fabrication drawings.

MODULE 1

Engineering Drawing & AutoCAD Fundamentals

TOPICS COVERED:

- Introduction to AutoCAD Mechanical
- Engineering Drawing Fundamentals
- AutoCAD Interface & Navigation
- Drawing Tools & Editing Commands
- Coordinate Systems & Precision Drawing
- Layers, Annotation & Dimensioning Basics

SKILLS GAINED:

- Engineering Drawing Knowledge
- AutoCAD Fundamentals
- Drafting Workflow Understanding
- Technical Drawing Skills

PRACTICAL LEARNING:

- Create basic engineering drawings
- Understand drafting standards
- Work with drawing and editing tools
- Practice dimensioning and annotations

MODULE 2

2D Mechanical Drafting & Design

TOPICS COVERED:

- Mechanical Drafting Techniques
- Geometric Construction & Projection
- Orthographic & Isometric Drawings
- Dimensioning & Tolerance Standards
- Mechanical Symbols & Annotation
- Layouts, Templates & Plotting

SKILLS GAINED:

- 2D Mechanical Drafting Skills
- Technical Drawing Standards
- Design Documentation Knowledge
- Industrial CAD Workflow Understanding

PRACTICAL LEARNING:

- Draft machine components
- Create technical layouts and drawings
- Apply industrial drafting standards
- Prepare printable engineering drawings

MODULE 3

3D Mechanical Modeling & Assembly Design

TOPICS COVERED:

- Introduction to 3D Modeling
- Solid & Surface Modeling Techniques
- Mechanical Part Design
- Assembly Modeling & Constraints
- Exploded Views & Assembly Drawings
- Rendering & Visualization Basics

SKILLS GAINED:

- 3D Modeling Skills
- Assembly Design Knowledge
- Product Design Understanding
- Mechanical Visualization Techniques

PRACTICAL LEARNING:

- Build 3D product models
- Create mechanical assemblies
- Design industrial machine parts
- Generate realistic model visualizations

Module 4

Manufacturing Design & Industrial Drafting

TOPICS COVERED:

- Manufacturing Process Fundamentals
- Fabrication & Production Drawings
- Sheet Metal Design Basics
- Welding Symbols & Standards
- Industrial Drafting Practices
- Mechanical Bill of Materials (BOM)

SKILLS GAINED

- Manufacturing Drawing Skills
- Fabrication Design Knowledge
- Industrial Documentation Skills
- Production Workflow Understanding

PRACTICAL LEARNING:

- Create manufacturing-ready drawings
- Design fabrication layouts
- Understand production workflows
- Prepare BOM and industrial documentation

Advanced Mechanical Design & CAD Automation

TOPICS COVERED:

- Advanced Mechanical Design Concepts
- CAD Standards & Workflow Optimization
- Mechanical Design Calculations Basics
- Parametric Design Techniques
- CAD Automation & Productivity Tools
- Design Validation & Error Checking

PRACTICAL LEARNING:

- Optimize CAD design workflows
- Work with advanced drafting systems
- Improve productivity using automation tools
- Validate mechanical design accuracy

ADVANCED CONCEPTS INCLUDED:

- Parametric Mechanical Modeling
- CAD Productivity Optimization
- Industrial Design Standards
- Design Error Reduction Techniques
- Advanced Drafting Workflow
- Real-World Engineering Practices

SKILLS GAINED

- Advanced CAD Design Skills
- Workflow Optimization Knowledge
- Parametric Modeling Understanding
- Industrial Engineering Practices

Module 6

Live Mechanical Design Project & Team Collaboration

TOPICS COVERED:

- Mechanical Project Planning
- Industrial Design Workflow
- Product & Assembly Design
- Design Documentation & Reporting
- Team Collaboration & Review Sessions
- Final Mechanical Design Presentation

SKILLS GAINED:

- Real-World Mechanical Design Experience
- Team Collaboration Skills
- CAD Documentation Skills
- End-to-End Design Workflow Understanding

PRACTICAL LEARNING:

- Work on real-world design projects
- Collaborate in CAD engineering teams
- Create professional engineering documentation
- Present design concepts professionally

Module 7

Placement & Career Preparation

TOPICS COVERED:

- Resume Building & ATS Optimization
- LinkedIn & Professional Branding
- AutoCAD Mechanical Interview Preparation
- CAD Design Portfolio Development
- Mock Interviews & HR Preparation
- Career Guidance & Industry Exposure

OUTCOMES

Students will be prepared for internships, CAD drafting roles, mechanical design opportunities, and manufacturing industry careers.

CAREER SUPPORT INCLUDES:

- Resume & LinkedIn Reviews
- Mock Technical Interviews
- Internship & Placement Assistance
- CAD Portfolio Guidance
- Career Mentorship Sessions
- Professional Communication Training



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Thank You!!



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