INVENTATEQ

MASTER PLANT DESIGN COURSE With Placement

Build In-Demand Professional Expertise with Real-Time Hands-on Plant Design Training

WHAT'S INSIDE THE COURSE

COURSE HIGHLIGHTS

- 100% Practical & Real-Time Hands-on Labs
- Industry Expert Trainers with Live Project Experience
- Interview Preparation & Resume Building Support
- 100% Dedicated Placement Support & HR Call & Mock Interviews

18+ Years Experience | 500+ Students Trained | 25K Hours Delivered | 10K Hours Delivered

Enroll at WhatsApp +91 98870 33678

ENROLL NOW STARTS HERE !

How InventateQ Helps You

Working Adults Looking for Career Growth

Career Beginners Looking for Job Opportunities

Career Switchers Looking for Change

Fresh Graduates Looking for Industry Exposure

Technical Professionals Looking for Upskilling

Career Gap Candidates Looking for Comeback

ARE YOU FACING THESE CHALLENGES ?

- Still learning from your friend after graduation?
- Worried about your Plant Design Career Path for the future ahead?
- Struggling to get yourself understanding fundamental growth opportunities?
- Feel not confident to go in front of Interviewer for a job?
- Not getting interviews calls despite applying for 100's jobs?

ABOUT INVENTATEQ

Empowering engineers with practical skills and industry knowledge to accelerate their careers in engineering and manufacturing industries.

Our Mission
To bridge the gap between academic learning and real-world industry requirements by delivering practical, hands-on training that prepares engineers for immediate impact in their careers.

Our Vision
To be the leading platform for engineering education, recognized for excellence in practical training, innovation, and successful career outcomes for our students.

Why Thousands Choose Inventateq?

15+	500+	25,000+	15,000+
Years Experience	Students Trained	Hours Delivered	Hours Delivered

We Collaborate With :

Deloitte. | Capgemini | AMAZON | ACCENTURE | TATA | Mahindra

WHY LEARN PLANT DESIGN ?

Plant design is the engineering discipline of designing and planning the layout, equipment, piping, and infrastructure of industrial facilities like factories, refineries, and power plants.

Industries Scope with In-demand Skills

- Automobile Industry Demand
- Pharmaceutical Industry Demand
- Petroleum Industry Demand
- Chemical Industry Demand
- Cross-industry Opportunities
- Future-Proof Career Growth
- Global Certification Pathways
- Worldwide Job Opportunities

Average Plant Design Professional Salary in India

₹5. 5 LPA - ₹18 LPA

WHY INVENTATEQ ?

We are not just another training institute. We're a dedicated team that cares about your success and is committed to helping you achieve your career goals.

STUDENT ALUMNOUS

- 100% Practical & Real-Time Hands-on Training
- 100% Job Placement Support
- Interview Preparation & Resume Building
- Certification from Leading Industry Bodies
- Unlimited Access to Labs & Live Projects

COURSE & PLACEMENT VIDEOS

Watch Now

Watch Now

Watch Now

Watch Now

"At Inventateq, Your Success Is Our Mission !"

GUARANTEED PLACEMENT SUPPORT

We Are Can't Stand, because we give the Real world

- Aptitude Training
- Technical Training
- Soft Skills Training
- Resume Preparation
- Mock Interviews
- Career Path Preparation
- Linkedin Profile Optimization
- Interview Preparation
- Placement Drives & Hiring Events

OUR PLACEMENT PARTNERS

Tata | Adhaya | Alpha

Capgemini | Tech Mahindra | Infosys

Wipro | Accenture

OUR PLACEMENT STATS

18,000+	500+	95%	41,PR
Students Placed	Hiring Partners	Placement Rate	Average Package

Check Our Recent Placements

CAREER PROGRESSION

Your career path, salary growth, and skills development for each role.

ROLE/TITLE	TYPICAL RESPONSIBILITIES	EXPECTED SALARY
Plant Design Engineer - Executive	Assisting in Plant Design layouts, configuration, and preparing basic engineering drawings.	3 to 5 LPA
Plant Design Engineer - Specialist	Independently handling plant design projects, detailed layouts, and discipline-specific engineering.	5 to 8 LPA
Plant Design Engineer - Senior Engineer	Leading plant design projects, coordinating with clients, and managing project timelines and deliverables.	8 to 12 LPA

SKILLS ROADMAP

Progress from foundation to expert-level mastery, step by step.

ROADMAP	PRACTICAL SCOPE	WORKING EXPERIENCE
Foundation (Foundation)	Basic engineering drawings, plant layout concepts, and industry terminology.	Assisting in basic drawings and learning plant terminology.
Intermediate (Intermediate)	Detailed engineering drawings, piping and equipment layouts, and basic design calculations.	Working on detailed drawings and handling small design tasks.
Advanced (Advanced Proficiency)	Complex plant design projects, 3D modeling, and multi-discipline coordination.	Leading design projects and managing engineering teams.
Professional (Professional Proficiency)	Expert-level project management, client interaction, and strategic decision-making.	Overseeing large-scale projects and mentoring junior engineers.

DETAILED MODULE PLAN

In-depth curriculum, 3 Months Duration, 4 hours/ course/ Daily training

Module 1: Introduction to Plant Design

- Fundamentals of Plant Design
- Role of a Plant Design Engineer
- Plant Design Process
- Engineering Disciplines Overview
- Industry Standards and Codes

▶ 10:00:00 Lab
Familiarize yourself with the software, navigation, and complete your first Plant Design exercise.

▶ 00:00:00 Assignment
Review what Plant Design is used for and why companies invest in it, wrap up the day.

Module 2: Process Engineering Basics

- Process Flow Diagrams (PFDs)
- Piping & Instrumentation Diagrams (P&IDs)
- Material and Energy Balance
- Process Equipment
- Process Design Fundamentals

▶ 10:00:00 Lab
Create a simple Process Flow Diagram (PFD) and a basic piping layout in multiple views.

▶ 00:00:00 Assignment
Complete the Process Flow Diagram (PFD) and submit your work for evaluation today.

Module 3: Plant Layout Design

- Plant Layout Principles
- Equipment Arrangement
- Piping Layout Basics
- Space Management
- Safety and Accessibility Considerations

▶ 10:00:00 Lab
Develop a plant layout based on a given Process Flow Diagram and apply your knowledge.

▶ 00:00:00 Assignment
Complete the plant layout design based on the Process Flow Diagram and submit your work.

Module 4: Piping Design

- Piping Components
- Pipe Sizing Basics
- Pipe Supports
- Piping Material Selection
- Piping Material Specifications

▶ 10:00:00 Lab
Design a piping system for a given Process Flow Diagram and apply your knowledge.

▶ 00:00:00 Assignment
Complete the piping system design based on the Process Flow Diagram and submit your work.

Module 5: Equipment Design

- Pumps
- Heat Exchangers
- Pressure Vessels
- Storage Tanks
- Compressors

▶ 10:00:00 Lab
Design and size equipment for a given Process and Utility Flow Diagram.

▶ 00:00:00 Assignment
Complete the equipment design based on the Process and Utility Flow Diagram and submit your work.

Module 6: Mechanical & Structural Design

- Structural Steel Design Basics
- Foundation Design
- Foundation Concepts
- Mechanical Equipment
- Pressure Vessel Design

▶ 10:00:00 Lab
Design a foundation for a piece of Mechanical Equipment and verify your results.

▶ 00:00:00 Assignment
Complete the foundation design for a piece of Mechanical Equipment and submit your work.

Module 7: Instrumentation & Electrical Basics

- Instrumentation Basics
- Control Valves
- Electrical Fundamentals
- Motors and Motor Control
- Cable Routing Overview

▶ 10:00:00 Lab
Design a control loop and select appropriate instrumentation for a given process.

▶ 00:00:00 Assignment
Complete the control loop design and submit your work for evaluation.

Module 8: Plant Safety & Standards

- HAZOP Overview
- Safety in Plant Design
- Fire & Gas Systems
- Risk Assessment
- Environmental Considerations

▶ 10:00:00 Lab
Conduct a HAZOP study on a given process and identify safety risks.

▶ 00:00:00 Assignment
Submit the completed HAZOP Overview and how you want to apply it.

Module 9: 3D Plant Modelling

- Introduction to 3D Modeling
- Equipment Modeling
- Piping Modeling
- Structural Modeling
- Isometric Drawing Generation

▶ 10:00:00 Lab
Create a 3D model of a small plant section including equipment, piping, and structure.

▶ 00:00:00 Assignment
Complete the 3D model and submit your work for evaluation.

Module 10: Real -Time Projects

- Industrial Plant Layout Project
- Piping Design Project
- Process Flow Diagram Project
- 3 Plant Modeling Projects

▶ 10:00:00 Lab
Work on a real-world project, applying everything you've learned so far.

▶ 00:00:00 Assignment
Finalize your project deliverables and prepare for your design discussion with a professional.

REAL - WORLD PORTFOLIO PROJECTS

Practical industry scenarios, mock assignment, and demonstrable project outcomes.

Project 1: Industrial Plant Layout Project

Objective: Design the layout of a small industrial plant, including equipment, piping, and utilities.
Skills you will Gain: Understanding of Equipment, Piping Layout, Utility Systems, Safety Considerations
Tools used: AutoCAD Plant 3D, Microsoft Excel
Project outcomes: Industrial Plant Layout Drawing, Equipment List, Piping Layout Drawing, Utility Systems Layout

Project 2: Process Flow Diagram Project

Objective: Create a Process Flow Diagram (PFD) and Piping and Instrumentation Diagram (P&ID) for a chemical process.
Skills you will Gain: Understanding of Process Flow Diagrams, Piping and Instrumentation Diagrams, Process Simulation
Tools used: AutoCAD Plant 3D, Microsoft Excel
Project outcomes: Process Flow Diagram (PFD), Piping and Instrumentation Diagram (P&ID), Process Simulation Report

Project 3: Equipment Layout Case Study

Objective: Design the layout of a specific piece of equipment, such as a pump or heat exchanger.
Skills you will Gain: Equipment Layout Design, Piping Design, Structural Design
Tools used: AutoCAD Plant 3D, Microsoft Excel
Project outcomes: Equipment Layout Drawing, Piping Design Drawing, Structural Design Drawing

Project 4: Plant Design Project

Objective: Design a complete plant, including all aspects of plant design, from concept to detailed engineering.
Skills you will Gain: Comprehensive Plant Design, Project Management, Teamwork
Tools used: AutoCAD Plant 3D, Microsoft Project, Microsoft Excel
Project outcomes: Complete Plant Design Package, Project Report, Presentation

Project 5: Plant Design Case Study

Objective: Analyze a real-world plant design project and provide recommendations for improvement.
Skills you will Gain: Critical Thinking, Problem Solving, Plant Design Principles
Tools used: Microsoft Word, Microsoft PowerPoint
Project outcomes: Case Study Report, Presentation

Project 6: 3D Plant Modeling Project

Objective: Create a 3D model of a plant, including equipment, piping, and structures.
Skills you will Gain: 3D Modeling, Plant Design Visualization, Clash Detection
Tools used: AutoCAD Plant 3D, Navisworks
Project outcomes: 3D Plant Model, Clash Detection Report, Visualization Images

ASSESSMENT FRAMEWORK

Multiple check-ups, continuous evaluation, and transparent criteria.

ASSESSMENT	ASSESSMENT FOCUS	WHAT IS EVALUATED
Weekly Knowledge Quizzes	Core theory, terminology, industry standards, and fundamental concepts.	Understanding and retention of key concepts and terminology.
Assignments & Practice Reviews	Practical application, problem-solving, and hands-on skill development.	Ability to apply theoretical knowledge to real-world scenarios.
Mock Interviews	Communication skills, technical knowledge, and interview readiness.	Confidence, clarity, and preparedness for job interviews.
Final Practical Examination	Comprehensive project work, design deliverables, and technical presentation.	Complete application of skills and knowledge to a capstone project.
Technical Mock Viva	Technical reasoning, troubleshooting approach, and in-depth knowledge.	Accountability, technical depth, and ability to defend design decisions.

RESUME, GITHUB & LINKEDIN

Professional profile building for maximum visibility and opportunities.

- Industry-Ready Resume Templates
- Resume Review & Optimization
- Keyword Optimization for ATS Systems
- Professional Summary & Skills Section
- Project Showcase & Achievements
- Action Verbs & Impact Statements
- Resume Review & Feedback
- Resume Review & Feedback

OUR STUDENT SUCCESS STORIES

Real transformations, real placements, real careers.

READ REVIEWS

"The practical training I got here was the confidence I needed for my interviews. Within 2 months of completing the course, I landed my first job as a Plant Design Engineer. Highly recommended!"
— Rahul Sharma, Plant Design Engineer

★★★★★

"Inventateq's focus on real-world projects and industry standards made the difference. The trainers helped me build a portfolio that impressed every interviewer I met."
— Priya Nair, Piping Design Engineer

★★★★★

"The best investment I've made in my career. The placement support was exceptional — they helped me with resume, mock interviews, and even negotiation. I got a 40% salary hike!"
— Arjun Mehta, Senior Plant Design Engineer

★★★★★

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CONTACT US

JOB HUNTING ENDS HERE

Let's discuss your career goals and how we can help you achieve your Dream Job!

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