

# PROCESSTECH ACADEMY

ProcessTech Academy's  
Journey to Success

Class Room & Online Training

## ABOUT US

- ProcessTech Academy, founded in 2022 in Kolkata, offers specialized training in chemical engineering to bridge the skills gap in process, oil and gas, and petrochemical industries.
- Processtech Academy's Process Design Engineering course enhances candidates' skills through comprehensive training on fundamental engineering principles and technical concepts applied in process and plant design.
- Our faculty comprises seasoned experts with over 25 years of experience from top process design engineering firms, ensuring globally relevant and industry-aligned training.

## OUR VISION

Expert Training and High-Quality Study Materials for Excellence in Process Design Engineering.

## OUR MISSION

Developing Skilled Professionals Who Deliver Innovative Solutions and Exceptional Value to Industries.

## Eligibility Criteria

- BE/BTech in Chemical Engg.
- ME/MTech in Chemical Engg.
- Last Year Student in Chemical Engg.
- Engineers Working in Production and Other Field.

**Sign up now**

# COURSE SYLLABUS



## Module 1 : Basics Of Chemical Engineering

- Unit Conversion
- Chemical Engineering Calculations
- Basic Understanding of Fluid flow operation, Mass Transfer operation & Heat Transfer Operation.

## Module 2 : Basics of Process Engineering

- Role of Process Engineer in Chemical Industry
- Types of Projects : ( Basic Design requirements based on Types of Plants/Projects and project economics.), Scope of Project, Deliverables.
- Design Basis
- Introduction to Basic Engineering & Detail Engineering
- Relevant codes and standards used in industry : TEMA, ANSI, IBR, ASME, API, IS, GPSA
- Introduction to BFD, PFD, P&ID and Conceptual Layout
- PFD and P&ID's (Piping & Instrumentation Diagram) Preparation, Line List
- Material & Energy Balance

## Module 3 : Process Equipment Design

- Line Sizing : Hydraulics, Pressure Drop Calculation
- Control Valve : Sizing, Rating and Datasheet Preparation
- Pumps : Classification, Selection, Sizing, Rating and Datasheet Preparation
- Compressors: Classification, Selection, Compressor Surge analysis
- Heat Exchangers: Classification, Selection, Thermal Design and Datasheet Preparation
- 2 Phase & 3 Phase Separators, KOD Design and Datasheet Preparation Distillation Column Design and Datasheet Preparation
- Cooling Tower : Concepts, Sizing and Datasheet Preparation
- Process Safety: PRV, PSV, PVRV, RD, TRV,VRV Design and Sizing, rating and Datasheet Preparation

## Module 4 : Process Engineering Deliverables

- Storage Tanks : Classification, Selection, Design and Datasheet Preparation
- PDS & IPDS (Instr. Process datasheets)
- SMDS (Special Material Data Sheet): Steam Traps, Strainers, Filters, Sight, Glass, Hoses. Steam Ejector, Flame Arrestor, Static Mixer
- Introduction to MSDS, HAZOP & PSSR: Case Study, HAC (Hazardous Area Classification)
- Preparation of SOP, Cause and effect diagram & Control philosophy
- Simulation Software Applications in Process Engineering
- How to prepare Impressive Curriculum vitae (CV)
- Technical/HR Interview Guidance