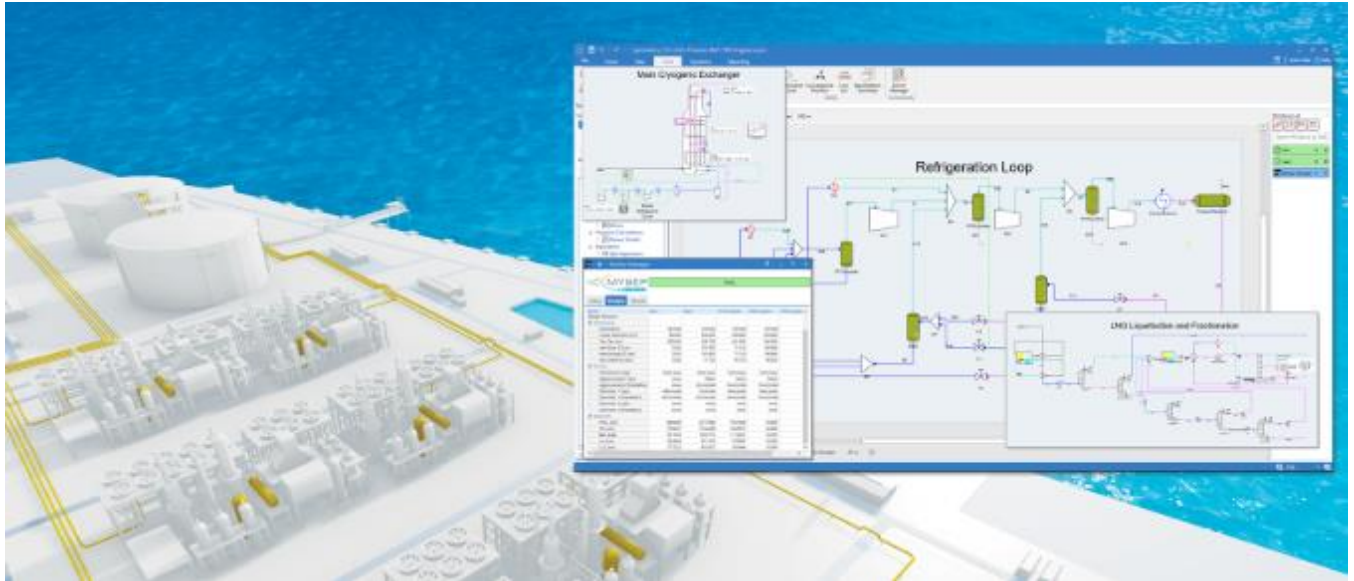




Basics of Process Simulator systems

Course Introduction:

Process simulators are powerful tools used in various industries to model, analyze, and optimize processes. They allow engineers and operators to visualize process behavior, assess performance, and make informed decisions regarding design and operational strategies. This 5-day theoretical training course, "Basics of Process Simulator Systems," is designed to provide participants with a foundational understanding of the principles, functionalities, and applications of process simulation technology.

Throughout the course, participants will explore the essential concepts behind process simulators, including modeling techniques, data input requirements, and analysis methods. The training will cover various types of process simulators and their applications across different industries, emphasizing the importance of simulation in improving efficiency, safety, and cost-effectiveness. By examining case studies and real-world applications, attendees will gain insights into how process simulators can enhance operational performance and drive innovation.

Course Objectives:

By the end of the program, participants will be able to:

- Understand the fundamental concepts of process simulation.
- Learn about different types of process simulators and their applications.
- Explore modeling techniques and data input requirements for simulations.
- Analyze the benefits of using process simulators in industrial settings.
- Familiarize participants with case studies highlighting successful simulation applications.

Who Should Attend?

This course is intended for Process engineers and designers in various industries, Operations personnel involved in process optimization, Quality assurance and compliance professionals and Project managers overseeing process simulation initiatives.

Course Outline:

Day 1: Introduction to Process Simulation

- Overview of process simulation and its significance in industry
- Key definitions and concepts related to process simulation systems
- Historical development and evolution of process simulators

Day 2: Types of Process Simulators

- Examination of different categories of process simulators: steady-state vs. dynamic
- Overview of popular process simulation software and tools
- Applications of simulators in various industries (e.g., oil and gas, chemical, food processing)

Day 3: Modeling Techniques and Data Requirements

- Introduction to modeling techniques used in process simulation
- Fundamentals of data input and validation for accurate simulations
- Understanding process flow diagrams (PFDs) and piping and instrumentation diagrams (P&IDs)

Day 4: Analyzing Simulation Results

- Techniques for interpreting simulation outputs and results
- Assessing performance metrics and key indicators
- Case studies on successful analysis and optimization using simulations

Day 5: Benefits and Future Trends in Process Simulation

- Overview of the benefits of using process simulators in industrial operations
- Discussion of challenges and limitations of process simulation technology
- Future trends and innovations in process simulation systems

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work

Course Fees:

To be advice as per course location. This rate includes participant's manual, Hands-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session