20TH TO 22ND OCTOBER 2026
INPROCESS OFFICE, BARCELONA

STEADY STATE PROCESS SIMULATION

Basic Process Simulation course for engineers who begin to be exposed to the technology.

INTRODUCTION

The course content covers the basic needs of process simulation users. The basic unit operations are introduced in a stepwise manner with the objective of being able to build flowsheets by the end of the course. The use of several software functionalities will show users how to explore operating alternatives for the processing plant units that are being studied.

A copy of the extensive training material used during the course will be provided to the students to be used as a basis for further study.

COURSE OBJECTIVES

The course has been designed to include many hands-on exercises to facilitate a more efficient and interesting learning experience. Theory is used to introduce the objectives of every module in the course as well as to help attendees to understand how the underlying calculations are performed.

The concepts acquired during the course will allow engineers to build their own process simulation cases to solve problems in the daily operation of the plant units – as well as supporting design studies. Basing decisions on rigorous simulation results will lead to better and quicker decision making and furthermore improve confidence in the decisions taken.

COURSE AUDIENCE

This course is intended for engineers beginning to use process simulation as well as for those who already use it but who need a refresher to experiment with new software features or extend the applications they use process simulation for. The workshops examples are taken from common industry processes and have been designed with an increasing complexity, in order to help in developing the attendees' learning curve.

The course content is aimed at process engineers, control engineers, safety and environmental engineers, planning engineers and engineers from other departments where process simulation is or could be in use.

INSTRUCTORS

The training course will be lectured in English language by experienced **Inprocess** instructors - who accumulate several years of experience in the use of process simulation both at industry and research/university level.

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MODULES CONTENT

MODULE NUMBER	MODULE TITLE AND SHORT DESCRIPTION	TIME	DAY
1	INTRODUCTION TO THE PROCESS SIMULATOR Working with an existing case. Getting used to GUI elements. Setting-up a user preferences file. How to work with fluid streams. How to install stream utilities. How to install and connect unit operations. The Degrees Of Freedom concept.	3 hours	Day 1
2	BASIC THERMODYNAMICS Creating a new case. How to select components for a simulation: Traditional - hypothetical. The need of thermodynamic correlations and methods.	1 hour	
3	HEAT TRANSFER UNIT OPERATIONS Heaters, Coolers, Shell & Tube Heat Exchangers. Air coolers. Design calculations. Rating simulations.	2 hours	
4	REPORTING Exploring how to extract the results obtained in the simulation calculations by the generation of internal reports or by exporting them to a third software.	1 hour	
5	LOGICAL OPERATORS, SPREADSHEET & CASE STUDY Additional mathematical tools sometimes needed to drive the simulation results to the desired optimal or conditional solution. **Set**. **Adjust**. **Balance**. **Recycles**. Use of the internal **Spreadsheet** to enhance the level of possible flowsheet calculations. Sensitivity Analysis (**Case Study** Tool).	4 hours	Day 2
6	DISTILLATION COLUMNS Distillation columns: How to install, define and solve distillation columns. Absorbers. Condensers and Reboilers. Column Design. Column Sizing.	3 hours	
7	REACTIONS AND REACTORS How to define several types of reactions. How to use them inside reactors in the flowsheet. Basic reactors (conversion, equilibrium, Gibbs). CSTRs. PFRs.	3 hours	Day 3
8	COMPRESSORS, PUMPS AND PIPELINES Simulation of compressors and pumps, with and without curves. Calculation of outlet conditions. Modeling of pipelines for pressure drop and heat transfer calculations.	2 hours	
9	ECONOMIC EVALUATION In order to develop the most economical design of a process or a unit, not only must the production and the purity be considered, but the operating costs as well. The use of internal spreadsheet will enhance the level of possible flowsheet and economical calculations. Case Studies for Sensitivity Analysis.	2 hours	
10	TROUBLESHOOTING OF CASES Analyzing badly setup cases to try to investigate where the errors or mistakes are. Understanding inconsistencies. How to eliminate them.	2 hours	Option

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HOW TO REGISTER

To book your place at the course please, send us an email to: **training@inprocessgroup.com** detailing:

- Course name and dates
- Attendee name
- Company/Department/Position
- Phone number
- email
- Short (less than 50 words) background description
- Need for proforma invoice?
- Attach the completed Appendix A that you will find at the end of this brochure

After receipt of the registration request, places will be reserved for 10 days. After payment of the course fee, the registration is firmly confirmed. In case you are facing issues to travel, a remote attendance through TEAMS or Webex meeting can be also explored under request. Indicate the same in your registration.

For an optimal learning experience, the number of available places is limited to 10 attendees. Please, register as soon as possible in order to ensure your participation.

COURSE VENUE

The course will be given from Inprocess' headquarters office:

Carrer Pedro i Pons 9-11, 13th floor
E-08034 Barcelona.

Our office is located 50m from the Av. Diagonal, near María Cristina metro station, directly connected to the city centre and main railway stations.

Depending on the number of attendees the location of the course might change to a place nearby. Inprocess will inform the attendees with enough anticipation.

COURSE PRICE

This 3-days course is priced **€ 1,900**. All prices and rates quoted in this document are exclusive of taxes and duties.

PAYMENT

All bank transfers in Euros to:

Deutsche Bank

CCC: **0019 0020 9240 1029 4972**

IBAN: **ES17 0019 0020 92 4010294972**

SWIFT: **DEUTESBBXXX**

Send us an email with a copy of the bank transfer to inform us about the payment (**training@inprocessgroup.com**)

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Appendix A: Workflow for Order

Please fill in and sign the information below: **Order** (page 5) and email or fax to us at least 1 month before start of the training.

Please provide complete and clearly printed contact and billing details:

	Contact Information	**Billing Information**
		o same as contact information
Name :		
Title / Department :		
Company :		
Complete Address :		
Telephone Number :		
Fax Number :		
Email Address :		
VAT # :		
Signature :		

Purchase order (number / date):

O is enclosed O will follow by mail

O my company does not require a purchase order