This training course is offered under the **Alliance4Training** brand

Training - Operation of a Chemical Production Unit

CRC-EN-P | **Face-to-face only** | **4 days**

This training provides greater autonomy in the operation and optimization of the unit

Level
Skilled

Public
Site operating personnel involved in the operation of the unit(s) to be studied in more detail: chemical, petrochemical or refining industry: field operators, console operators, chief operators, as well as technician

Objectives
Attendees will be able to implement the following skills:

- Explain the characteristics of the chemical transformation(s) and separations implemented and the associated operational requirements
- list the operating parameters, the role of the control loops and the process control elements implemented
- detect the cause of the main malfunctions and know the appropriate corrective measures

Pedagogical & technical resources

- The program and content are adjusted according to the types of processes implemented on the site, under cover of a confidentiality agreement if necessary
- Content and case studies are applied to site units
- Numerous references on sites with very varied characteristics

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites
No prerequisites are necessary to follow this course

Responsable
IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

MAIN SECTIONS OF THE UNIT — 0.25 day

General diagram of the unit and detail of the reaction zone.
Main operating conditions: temperatures, pressures, flow rates; control.

CHEMICAL TRANSFORMATIONS — 0.5 day

Composition of the feedstock and the reaction effluent - Nature of the feed and characteristics of the products.
Nature and characteristics of the reactions carried out: thermal effect, complete or balanced, catalyzed or not.
Nature of the catalyst (if relevant): mode of action, impact of poisons, causes of aging, etc.
Operating parameters: temperature, pressure, proportion of reactants.
Potential influence of operating conditions on the conversion rate, reaction rate, yield of undesirable products, etc.

EQUIPMENT & MATERIALS USED — 0.5 day

Reactors: type (plug flow, mixed), internal (nature of the wall, arrangement of the catalyst, agitators), associated materials and thermal fluids,
Separation equipment: distillation, filtration, etc.
Specific instrumentation, control and automation implemented, safety equipment (valves, rupture discs, inhibitor injection system, etc.°;

ANALYSIS OF OPERATING CONDITIONS — 1 day

Material balance - Thermal balance.
Influence of operating conditions: temperature, pressure, flow rate, etc. in an operating situation.
Conversion rates, selectivity and yield observed.
Reaction cycle: duration, evolution of parameters during the period. Operating constraints (catalyst aging, nature of effluents, variation in feed quality, etc.).
Operating conditions and parameters for the fractionation and downstream purification process.

UNIT OPERATION AND INCIDENTS — 0.75 day

Operation tuning case studies
Nature and origin of potential malfunctions: contamination of the feed, runaway, etc.
Safety Instrumented Systems.
Safety procedures. Consequences.

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com