

Training - Petroleum Studies Refining and Petrochemicals



GDPETRC-EN-P



Face-to-face only



60 days

The set of public courses hereunder leads to an IFP Training graduate Certificate of petroleum studies in Refining and Petrochemicals

IFP Training Certificate

Graduate Certificate

Level

Expert

Public

Process Engineers newly recruited or technicians with high potential and involved in design, operation and optimization of equipment and processes in the refining and petrochemical industry

Objectives

Attendees will be able to implement the following skills:

- Explain the role of various processing units in a refinery and petrochemical complex and describe the main manufacturing schemes encountered.
- Read and understand a P&ID, identify the technology used for field instrumentation.
- Describe thermal equipment and explain impact of operating conditions on heaters' performance.
- Explain the operation and operation of centrifugal pumps and technical solutions.
- Explain the operation of centrifugal and axial compressors, steam turbines and expanders.
- List the essential elements for the sizing and choice of a compressor or turbine.
- List the design and optimization criteria of a utility production scheme (steam, electricity, water, air) with regard to environmental constraints.
- List the various aspects of project engineering to be applied in real cases.
- Identify risks related to products used on a facility and the recommended preventive measures in view of the importance of the risk.
- Present pre-commissioning, commissioning and start-up activities on a project from the perspective of their programming and management.

Pedagogical & technical resources

- Detailed course material with a glossary of the main technical terms used in the refining & petrochemical industry.
- Active participation of trainees through interactive games and quizzes to grasp the key points of the course.
- Illustration of process control using dynamic simulators (IndissPlus de CORYS).
- Actual examples and applications from the refining, petrochemical and chemical industry.
- Use of a dynamic simulator (centrifugal compressor + steam turbine).
- Short scenarios of the most frequent and the most serious key equipment failures, proposed by the trainer and analyzed by the group. Participants shall use their technical knowledge, reasoning skills, multidisciplinary and operational capacities.
- Project by team (2 or 3 students): conception of a PID scheme from a PFD.

- Case studies and analysis of incidents and accidents.
- Cases studies on the precommissioning, commissioning and start-up of typical units.

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

Responsible

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

APPLIED THERMODYNAMICS	5 days
INSTRUMENTATION & PROCESS CONTROL CERTIFICATION	5 days
THERMAL EQUIPMENT	5 days
CENTRIFUGAL PUMPS & POSITIVE DISPLACEMENT PUMPS	5 days
KEY POINTS FOR COMPRESSORS & TURBINES OPERATION & INSPECTION	5 days
LIGHT CUTS PROCESSING	5 days
HEAVY CUTS PROCESSING	5 days
UTILITIES - ENVIRONMENT MANAGEMENT	5 days
PIPING & INSTRUMENTATION DIAGRAM - PID (PROJECT)	5 days
SAFETY IN PLANT OPERATION	5 days
COMMISSIONING & START-UP OF PROCESS UNITS	5 days
PRODUCTION OF BASE CHEMICALS & COMMODITY POLYMERS	5 days

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