

## Introduction to the Petrochemical Industry

1 day  
Overview

DECPET-EN-D

### LEVEL

Skilled

### PURPOSE

This course provides basic information on petrochemical industry and its integration in the petroleum chain.

### LEARNING OBJECTIVES

After completion of the course, participants will be able to:

- know the origin and uses of the main olefinic and aromatic intermediates,
- explain the different steps of the petrochemical industry,
- understand the stakes in term of economy and the main parameters which influence the productivity of the petrochemical industry,
- situate the petrochemical industry in its energy and geographic environment.

### WAYS AND MEANS

This training offers a new training solution: distance training, including not only a virtual classroom but also a complete environment to support the trainees in their process of acquisition of the provided contents.

Various pedagogical activities (quizzes, games...) allow the acquisition of the different technico-economical basis.

### LEARNING ASSESSMENT

Quiz.

### PREREQUISITES

No technical prerequisites for this course.

### MORE INFO

To take the best advantage of this course, it can be preceded by the course "Introduction to Refining". These two courses are scheduled consecutively.

## Agenda

### ORIGINS & USES OF OLEFINIC & AROMATIC INTERMEDIATES

0.25 d

Main units: steamcracking unit, catalytic reforming unit, fluid catalytic cracking unit.  
Outlets and main industrial uses of olefinics, diolefinics and aromatics hydrocarbons.  
Opening on the petrochemistry of the main plastics.

### THE DIFFERENT STEPS OF THE PETROCHEMICALS INDUSTRY

0.25 d

Analysis of the different paths of synthesis.  
Main polymer manufacturing.  
Risks related to products and processes.  
Interactions with refining (objectives, advantages, flow and services exchanges...).

## PETROCHEMICAL ECONOMICS & MANAGEMENT

0.25 d

General economic environment.

Main markets for olefins, C<sub>4</sub> cuts and aromatics.

Economics of a steamcracking unit using the different feeds.

## SITUATION TODAY & FUTURE TRENDS

0.25 d

Main challenges of the petrochemical industry on an international scale with emphasis on the shale Oil & Gas development in the US and the impact on the European market.

Future projects, strategy of the main actors, financial and political stakes.

Impact of the environmental regulations and climate change on the economics of the petrochemical industry.

Future trends for biosourced products and the related challenges.