

**Course Overview:**

This course will provide the basic knowledge required for understanding processes and operating issues in crude oil processing facilities. It is designed to improve the technical communication between operators and engineers as we develop an in-depth understanding of process operations.

**Course Objective:**

In this course we will present an overview of the integrated oil refinery. Each refining process will be presented, covering operating description and conditions, feedstock and catalyst selection, product yields, and the relationship between process parameters, unit performance and product output and properties. Finally, future operations, including anticipated changes in crude oil and product slates, will be recapped.

**Course Outline:**

- HYDROCARBON CHEMISTRY – STRUCTURES OF THE FOUR MAIN HYDROCARBON TYPES
- CRUDE OIL – PROPERTIES, SOURCES, ASSAYS, PRICING
- FUEL PRODUCTS – SPECS, ENVIRONMENTAL REGS, OXYGENATES, BIOFUELS
- ATMOSPHERIC AND VACUUM DISTILLATION, DESALTING
- FLUID CATALYTIC CRACKING
- CATALYTIC REFORMING AND AROMATICS RECOVERY
- ISOMERIZATION
- ALKYLATION
- HYDROTREATING AND HYDROCRACKING
- HYDROGEN PROCESSES, SULFUR RECOVERY, SWEETENING
- LUBE OIL BASE STOCKS
- RESID PROCESSING: VISBREAKING, DEASPHALTING, COKING, HYDROCRACKING
- POLLUTION CONTROL: AIR, WATER, PARTICULATES
- THE FUTURE: CRUDE OIL, PRODUCTS, PROCESSES

**Who Should Attend:**

The course is designed for plant operators, maintainers, Supervisors and other non-engineering personnel.

**Training Language:**

EN / AR

**Training Methodology:**

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities
- Case Studies
- Workshops
- Simulation