



Petroleum Refinery Processing



INTERNATIONAL ASSOCIATION FOR
HEALTH AND OCCUPATIONAL
SAFETY AND THE ENVIRONMENT



**Project
Management
Institute**
Regional
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Course Introduction:

This course provides a comprehensive overview of petroleum refinery processing, covering the essential principles, technologies, and operations involved in transforming crude oil into valuable products. Participants will gain insights into the various refining processes, equipment, and the importance of quality control in the petroleum industry.

Course Objectives:

By the end of the program, participants will be able to:

- Understand the petroleum industry landscape
- Analyze the composition and properties of various types of crude oil and their implications for refining
- Identify and explain the primary refining processes, including distillation, cracking, and reforming
- Identify key refinery equipment
- Explore future trends and innovations

Who Should Attend?

This course is beneficial for anyone aiming to deepen their understanding of petroleum refining processes, enhance their technical skills, or prepare for advanced roles in the industry.

Course Outline:

Overview of the Petroleum Industry

- History and significance of petroleum
- Global oil reserves and production trends

Fundamentals of Petroleum Refining

- Definition and purpose of refining
- Overview of the refining process flow

Crude Oil Composition and Properties

- Types of crude oil
- Physical and chemical properties relevant to refining

Primary Refining Processes

- Distillation: Principles and operations
- Separation techniques: Fractional distillation and cracking

Conversion Processes

- Catalytic cracking and hydrocracking
- Reforming and alkylation processes

Treatment Processes

- Desulfurization and hydrotreating
- Product stabilization and blending

Key Refinery Equipment

- Overview of distillation columns, reactors, and heat exchangers
- Importance of process control and instrumentation

Operational Aspects of Refineries

- Safety and environmental considerations
- Maintenance and troubleshooting in refinery operations

Quality Control in Refining

- Standards and regulations for petroleum products
- Testing methods and quality assurance processes

Future Trends in Petroleum Refining

- Challenges in the refining industry
- Innovations and sustainable practices in refining

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work

Course Fees:

To be advice as per course location. This rate includes participant's manual, Hands-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session