

**Training  
Course**

**Oil Refinery Operations and  
Safety**

## Course Plan

### Introduction

Oil refineries play a critical role in transforming crude oil into valuable products such as fuels, lubricants, and petrochemicals. Efficient and safe refinery operations are essential not only for profitability but also for environmental protection and personnel safety. This training program provides participants with in-depth knowledge of refinery processes, operational best practices, and safety measures required to prevent accidents and ensure compliance with industry standards.

### Course Objectives:

- ✓ Understand the fundamental processes involved in petroleum refining.
- ✓ Identify key equipment and their operational principles in refineries.
- ✓ Apply standard operating procedures to optimize production efficiency.
- ✓ Implement effective safety protocols to minimize operational risks.
- ✓ Recognize potential hazards and apply preventive measures.
- ✓ Interpret refinery process flow diagrams and safety documentation.
- ✓ Ensure compliance with international refinery safety standards.

## Who Should Attend?

- Refinery team leader, operators and technicians
- Process engineers and production supervisors
- Maintenance and reliability engineers
- HSE (Health, Safety, and Environment) professionals
- Oil & gas project managers involved in refining operations

## Training Methods:

- ✓ Online Video material.
- ✓ Presentation.
- ✓ Live Interactive sessions.
- ✓ Course presenter will make extensive use of all tools that will be needed for the virtual environment.
- ✓ Questions & Answers

## Course Outline:

### Day One

- Introduction to Petroleum Refining
- Overview of Crude Oil Properties and Classification
- Refinery Configurations and Flow Diagrams
- Crude Distillation Units (CDU) Operations
- Vacuum Distillation Process

### Day Two

- Catalytic Cracking Units (FCC) Operations
- Hydrocracking Process and Control
- Hydrotreating Units for Fuel Quality Improvement
- Reforming and Isomerization Processes
- Desulfurization and Environmental Compliance

### Day Three

- Heat Exchangers and Heat Integration in Refineries
- Pumps, Compressors, and Rotating Equipment in Refining
- Control Systems and Instrumentation in Refinery Operations
- Energy Efficiency and Loss Minimization
- Maintenance Strategies for Refinery Equipment

### Day Four

- Introduction to Process Safety Management (PSM)
- Hazard Identification and Risk Assessment in Refineries
- Fire Safety and Explosion Prevention Measures
- Emergency Response Planning and Drills
- Handling Hazardous Chemicals in Refinery Operations

### Day Five

- Personal Protective Equipment (PPE) for Refinery Workers
- Confined Space Entry Procedures and Safety
- Permit-to-Work Systems in Refineries
- Incident Investigation and Root Cause Analysis
- Best Practices for Sustainable and Safe Refinery Operations

## Training Details

Course Duration	5 Days
Pre-Schedule	16 – 20 Nov 2025
Venue	Italy – Milan - Sina De La Ville Hotel
Training Fees Per Person	KWD 1650 ( One Thousand Six Hundred FiftyOnly )
Course Fees Include	<ul style="list-style-type: none"> <li>✓ Tuition documentation</li> <li>✓ Curriculum and Training Handout</li> <li>✓ Five star Lunch</li> <li>✓ Completion Certificates</li> <li>✓ Lunch Included</li> </ul>