DUBAI-UAE

22-26 Dec 2025

Clean Fuel Technology & Standards

Why Choose this Training Course?

As refiners and chemical producers worldwide see higher crude oil and feed prices and continued demand for clean transportation fuels and lower production costs, a sound knowledge of clean fuel technology, specifications, standards, analysis, and quality monitoring is essential to understand its effect on engine performances as well as the emissions impact on environment.

This training course has been developed to provide an in-depth, yet a practical review of the art and science of "Clean Fuel Technology and Standards" in modern refineries. The program's content is both comprehensive and wide-ranging.

In addition to the scientific procedures and contents of this course, many case studies and implementations are planned to be presented in an open discussion forum with the participants.

This 5M International training course provides both theoretical and practical knowledge and skills highlighting:

- Fuel quality fundamentals
- Fuel production technologies
- Euro 5 and Euro 6 fuel specifications
- Gasoline specifications
- Jet Fuel specifications
- Diesel specifications
- Fuel quality monitoring system

What are the Goals?

At the end of this 5M International training course, you will learn to:

- Describe clean fuels chemistry, manufacturing technologies, and standards

- Compare testing parameters for gasoline, jet fuel, and road diesel
- Explain how fuel properties influence engine performance
- Explain ultra-low sulphur diesel properties and their impact on fuel performance
- Troubleshoot quality problems and contamination of fuels
- Discuss fuel quality monitoring system

Who is this Training Course for?

5M training course is suitable for a wide range of professionals but will greatly benefit:

- Operation Engineers
- Process Engineers
- Senior Operation Personnel
- Operation Staff
- Technical Supervisory Staff
- Plant Engineers
- Fuel quality specialists
- Measurement and quality control operators

How will this Training Course be Presented?

A highly interactive combination of lecture and discussion sessions will be managed to maximize the amount and quality of information, knowledge and experience transfer. The sessions will start by raising the most relevant questions and motivate everybody finding the right answers. The attendants will also be encouraged to raise more of their own questions and to share developing the right answers using their own analysis and experience.

Participants in this training course will receive thorough training on the subjects covered by the seminar outline with the Tutor utilizing a variety of proven adult learning teaching and facilitation techniques.

Course Outlines:

Day 1: Introduction to Oil Refining and Fuel Quality Fundamentals

- Crude oil chemistry and properties
- Classification of crude oils
- Crude assays and valuation
- Petroleum product specifications
- Petroleum products standardization and quality control
- Introduction to oil refineries
- Refinery configurations

Day 2: Gasoline

- Gasoline chemistry
- Manufacturing technologies: Naphtha Hydrotreater, Catalytic Reformer, Isomerization and Alkylation Units
- Gasoline specifications and quality monitoring system
- Testing parameters for gasoline
- Composition, Combustion Characteristics, Octane Number, Corrosiveness, Density, Flash Point and Fire Point, Oxygenates, Stability, and Instability, Volatility
- Effect of fuel properties on engine performance
- Troubleshoot quality problems and contamination of gasoline

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Day 3: Jet Fuel

- Jet fuel chemistry
- Manufacturing technologies
- Jet fuel specifications and quality monitoring system
- Testing parameters for Jet fuel
- Acidity, Calorific Value, Density, Flash Point, Freezing Point, Storage Stability, Thermal Stability, Viscosity, Volatility, Water
- Effect of fuel properties on engine performance
- Troubleshoot quality problems and contamination of jet fuel

Day 4: Diesel Fuel

- Diesel fuel chemistry
- Manufacturing technologies (Hydro processing)
- Diesel fuel specifications and quality monitoring system
- Testing parameters for Diesel fuel
- Acidity, Sulphur content, Appearance and Odor, Ash, Calorific Value, Carbon Residue, Cetane Number and Cetane Index, Cloud Point, Composition, Diesel Index, Flash Point, Freezing Point, Neutralization Number, Pour Point, Stability, Viscosity, Volatility, Water and Sediment
- Ultra-low sulphur diesel
- Effect of diesel fuel properties on engine performance
- Troubleshoot quality problems and contamination of diesel fuel

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Day 5: Euro 5 and Euro 6 Fuel Specifications and Emissions Standards

- Overview of Euro 5 and Euro 6 fuel specifications and emissions
- Quality control of products in petroleum refining
- Clean Fuel specifications
- Sampling procedures

Course Completion Certificate

On successful completion of the Training Course, the participants will be awarded with a 5M International Consultancy & Training Company Certificate.

Training course Price:

Number of Participants	Course Price
1 participant	KWD 1450.000
2 participants	KWD 1400.000
3 participants	KWD 1350.000
4 participants	KWD 1300.000
5 participants	KWD 1250.000
6 and above participants	KWD 1200.000