



## **External Training Course**

# **Operational Intelligence for Fuel Station Supervisors: From Data to Action**

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**From 22 Sep. To 26 Sep. 2025**

**From 06 Oct. To 10 Oct. 2025**

**From 17 Nov. To 21 Nov. 2025**

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**External Training Course:**

**Operational Intelligence for Fuel Station Supervisors:  
From Data to Action**

**From 22 Sep. To 26 Sep. 2025**

**Fees: 1400 KD**

**From 06 Oct. To 10 Oct. 2025**

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**Course Overview**

This advanced program focuses on technical supervisory excellence in modern fuel stations. Participants will learn how to use operational intelligence, data analytics, and automation systems to improve efficiency, prevent failures, ensure compliance, and manage day-to-day operational challenges. The training emphasizes data-to-action workflows, automation oversight, diagnostics, troubleshooting, and continuous performance improvement.

**Course Objectives**

**Participants will be able to:**

- Apply operational intelligence frameworks in station monitoring.
- Transform real-time data into practical supervisory actions.
- Oversee and optimize automation and monitoring systems.
- Conduct accurate diagnostics and troubleshooting of technical systems.
- Strengthen compliance with safety and environmental standards.
- Implement structured problem-solving approaches.
- Improve efficiency and reliability of fuel station operations.

**Training Methodology**

Interactive lectures and technical demonstrations.

Hands-on exercises with real operational data.

Troubleshooting simulations and case studies.

Group problem-solving workshops.

Industry best practice analysis and practical applications.

**Organizational Impact**

Higher technical reliability of fuel station operations.

Improved compliance with environmental and safety standards.

Reduced downtime through better diagnostics and predictive maintenance.

Enhanced efficiency through data-driven supervisory actions.

Lower operational losses and increased profitability.

## **Personal Impact**

Master advanced operational intelligence tools.

Strengthen diagnostic and troubleshooting capabilities.

Gain expertise in automation and technical supervision.

Enhance problem-solving techniques for station operations.

Build a professional profile as a highly skilled technical supervisor.

## **Course Content & Outline**

### **Day 1: Foundations of Operational Intelligence**

- Evolution of supervisory roles in modern fuel stations.
- Principles of operational intelligence in petroleum operations.
- Data sources: pumps, tanks, meters, SCADA, IoT sensors.
- Importance of real-time data collection and validation.
- Defining KPIs for fuel station performance monitoring.
- Linking operational data to supervisory responsibilities.

### **Day 2: Data-Driven Supervision & Advanced Analytics**

- Turning operational data into actionable insights.
- Detecting inefficiencies and anomalies in station performance.
- Predictive analytics for maintenance and failure prevention.
- Early warning signals for pumps, tanks, and sensors.
- Building and interpreting supervisory dashboards.
- Documentation and reporting for compliance.
- Using analytics to minimize losses and downtime.

### **Day 3: Automation & Smart Station Supervision**

- Supervisory roles in automated fuel station systems.
- Automated tank gauging, dispensing, and leak detection.
- Remote monitoring and cloud-based operational solutions.
- Alarm handling, escalation, and corrective actions.
- Using HMI (Human–Machine Interfaces) for control and monitoring.
- Safety considerations in automation oversight.
- Automation for reducing operational losses and improving compliance.

## **Day 4: Diagnostics, Troubleshooting & Risk Management**

- Structured problem-solving frameworks (RCA, PDCA, DMAIC).
- Diagnostics of pumps, dispensers, meters, automation panels, and sensors.
- Identifying risks: leakage, contamination, calibration errors.
- Emergency response procedures for station supervisors.
- Case studies of troubleshooting incidents in fuel stations.
- Compliance with API, NFPA, ISO and petroleum safety standards.
- Risk control strategies for minimizing downtime and losses.

## **Day 5: Supervisory Technical Excellence & Continuous Improvement**

- Characteristics of effective technical supervision in fuel stations.
- Conducting compliance and safety checks with accuracy.
- Benchmarking operations against industry best practices.
- Developing continuous improvement plans for station performance.
- Documentation and reporting improvements for regulators.
- Incorporating sustainability and alternative fuels into station operations.
- Group technical case study and review session.
- Final evaluation and certificate distribution.



### **Course Agenda (Bilingual A/E):**

#### **(1<sup>st</sup> Day) Agenda**

8.30	9.00	Opening Remarks (30 Min.).
9.00	11.30	<u>Discuss Course Major Points:</u> <ul style="list-style-type: none"> <li>• Foundations of Operational Intelligence.</li> <li>• Data-Driven Supervision &amp; Advanced Analytics.</li> <li>• Automation &amp; Smart Station Supervision.</li> <li>• Diagnostics, Troubleshooting &amp; Risk Management.</li> <li>• Supervisory Technical Excellence &amp; Continuous Improvement.</li> </ul>
11.30	12.00	Coffee Break
12.00	14.00	<u>Foundations of Operational Intelligence:</u> <ul style="list-style-type: none"> <li>• Evolution of supervisory roles in modern fuel stations.</li> <li>• Principles of operational intelligence in petroleum operations.</li> <li>• Data sources: pumps, tanks, meters, SCADA, IoT sensors.</li> <li>• Importance of real-time data collection and validation.</li> <li>• Defining KPIs for fuel station performance monitoring.</li> <li>• Linking operational data to supervisory responsibilities.</li> </ul>
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

#### **(2<sup>nd</sup> Day) Agenda**

9.00	11.30	<u>Data-Driven Supervision &amp; Advanced Analytics:</u> <ul style="list-style-type: none"> <li>• Turning operational data into actionable insights.</li> <li>• Detecting inefficiencies and anomalies in station performance.</li> <li>• Predictive analytics for maintenance and failure prevention.</li> <li>• Early warning signals for pumps, tanks, and sensors.</li> </ul>
11.30	12.00	Coffee Break
12.00	14.00	<u>Data-Driven Supervision &amp; Advanced Analytics:</u> <ul style="list-style-type: none"> <li>• Building and interpreting supervisory dashboards.</li> <li>• Documentation and reporting for compliance.</li> <li>• Using analytics to minimize losses and downtime.</li> </ul>
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

### (3<sup>rd</sup> Day) Agenda

9.00	11.30	<u>Automation &amp; Smart Station Supervision:</u> <ul style="list-style-type: none"> <li>• Supervisory roles in automated fuel station systems.</li> <li>• Automated tank gauging, dispensing, and leak detection.</li> <li>• Remote monitoring and cloud-based operational solutions.</li> <li>• Alarm handling, escalation, and corrective actions.</li> </ul>
11.30	12.00	Coffee Break
12.00	14.00	<u>Automation &amp; Smart Station Supervision:</u> <ul style="list-style-type: none"> <li>• Using HMI (Human–Machine Interfaces) for control and monitoring.</li> <li>• Safety considerations in automation oversight.</li> <li>• Automation for reducing operational losses and improving compliance.</li> </ul>
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

### (4<sup>th</sup> Day) Agenda

9.00	11.30	<u>Diagnostics, Troubleshooting &amp; Risk Management:</u> <ul style="list-style-type: none"> <li>• Structured problem-solving frameworks (RCA, PDCA, DMAIC).</li> <li>• Diagnostics of pumps, dispensers, meters, automation panels, and sensors.</li> <li>• Identifying risks: leakage, contamination, calibration errors.</li> <li>• Emergency response procedures for station supervisors.</li> </ul>
11.30	12.00	Coffee Break
12.00	14.00	<u>Diagnostics, Troubleshooting &amp; Risk Management:</u> <ul style="list-style-type: none"> <li>• Case studies of troubleshooting incidents in fuel stations.</li> <li>• Compliance with API, NFPA, ISO and petroleum safety standards.</li> <li>• Risk control strategies for minimizing downtime and losses.</li> </ul>
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

### (5<sup>th</sup> Day) Agenda

9.00	11.30	<u>Supervisory Technical Excellence &amp; Continuous Improvement:</u> <ul style="list-style-type: none"> <li>• Characteristics of effective technical supervision in fuel stations.</li> <li>• Conducting compliance and safety checks with accuracy.</li> <li>• Benchmarking operations against industry best practices.</li> <li>• Developing continuous improvement plans for station performance.</li> </ul>
11.30	12.00	Coffee Break
12.00	14.00	<u>Supervisory Technical Excellence &amp; Continuous Improvement:</u> <ul style="list-style-type: none"> <li>• Documentation and reporting improvements for regulators.</li> <li>• Incorporating sustainability and alternative fuels into station operations.</li> <li>• Group technical case study and review session.</li> <li>• Final evaluation and certificate distribution.</li> </ul>
14.00	14.30	Questions, Discussion & Conclusion Training Course.
14.30		Buffet Lunch