



External Training Course

Operational Excellence in Petroleum Industry: Tools, Practices & Best Practices

From 12 Oct. To 16 Oct. 2025

From 09 Nov. To 13 Nov. 2025

From 07 Dec. To 11 Dec. 2025

**InterContinental Cairo Semiramis by IHG
Hotel, Cairo, Egypt**

Mr. Ghanem F. Al-Otaibi

GM & Institute Owner

Tel.: 00965 22248901

Fax: 00965 22204999

Mob.: 00965 65548855

Mob.: 00965 97273712

Email: admin@agi-kw.com

Email: agi-kw@hotmail.com

W/SITE: WWW.AGI-KW.COM

External Training Course:

**Operational Excellence in Petroleum Industry:
Tools, Practices & Best Practices**

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Fees: 1750 KD

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Course Overview

The petroleum industry faces continuous challenges such as fluctuating markets, high operating costs, technological advancements, and the need for environmental sustainability. Achieving operational excellence is no longer optional—it is essential for survival and long-term competitiveness.

This intensive 5-day training course equips participants with the frameworks, methodologies, and tools required to optimize petroleum operations across upstream, midstream, and downstream segments. Through expert-led lectures, workshops, case studies, and group exercises, participants will develop the ability to enhance efficiency, improve reliability, and deliver sustainable performance.

Learning Objectives

By the end of this course, participants will be able to:

- Understand the full petroleum operations lifecycle and associated challenges.
- Apply operational excellence frameworks such as Lean and Six Sigma.
- Optimize production and processing systems for higher efficiency and reduced costs.
- Implement preventive and predictive maintenance strategies for reliability.
- Strengthen safety and environmental performance in line with international standards.
- Leverage digital technologies (AI, IoT, SCADA) to enhance operational performance.
- Develop strong analytical, problem-solving, and decision-making skills.

Training Methodology

- Interactive expert-led lectures.
- Case studies from leading international oil & gas companies.
- Hands-on workshops and group exercises.
- Problem-solving simulations of real-world challenges.
- Peer-to-peer discussions and experience sharing.

Organisational Impact

By applying the knowledge and practices gained in this course, organisations will achieve:

- Increased efficiency and reduced operating costs.
- Enhanced asset performance and reduced downtime.
- A stronger culture of safety, reliability, and accountability.
- Optimised production processes leading to improved output and quality.
- Adoption of digital transformation practices to maintain competitiveness.
- Integration of sustainability practices into daily operations.
- Alignment between operational activities and corporate strategy.

Personal Impact

By attending this course, participants will gain:

- A strong foundation in petroleum operational practices.
- Ability to apply Lean, Six Sigma, and best practices to real-world operations.
- Enhanced problem-solving and decision-making skills in complex environments.
- Greater competence in managing operational risks and challenges.
- Knowledge of the latest digital tools transforming petroleum operations.
- Improved leadership and communication skills for managing teams.
- Recognition as valuable contributors to organisational excellence and sustainability.

Course Modules & Content

Day 1 – Introduction to Petroleum Operations

- Petroleum value chain: upstream, midstream, downstream.
- Global operational challenges and industry dynamics.
- Benchmarking operational excellence: case examples from leading companies.
- Case study: Comparing ExxonMobil and Saudi Aramco operational frameworks.

Day 2 – Framework of Operational Excellence

- Principles of Lean operations in oil & gas.
- Six Sigma tools for efficiency and quality.
- Key Performance Indicators (KPIs) in petroleum operations.
- Risk-based management and decision-making.
- Workshop: Mapping operational processes and identifying inefficiencies.

Day 3 – Production & Processing Operations

- Production management and system optimization.
- Enhanced Oil Recovery (EOR) methods.
- Refining and petrochemical operations.
- Energy management in processing facilities.
- Group exercise: Resolving a production bottleneck scenario.

Day 4 – Maintenance, Reliability & Asset Management

- Preventive vs. predictive maintenance strategies.
- Reliability-Centered Maintenance (RCM).
- Asset lifecycle management frameworks.
- Techniques for reducing downtime and equipment failures.
- Case study: Predictive maintenance in offshore platforms.

Day 5 – Safety, Environment, Sustainability & Digital Transformation

- HSE management systems (ISO, OSHA, API standards).
- Reducing carbon footprint and emissions.
- Sustainability initiatives in petroleum operations.
- Digital transformation: AI, IoT, SCADA, and Digital Twin technologies.
- Future trends in operational excellence and energy transition.
- Final workshop: Designing an operational excellence roadmap for a petroleum company.

Expected Outcomes

At the end of this training, participants will return with:

- A comprehensive understanding of petroleum operations.
- Practical frameworks and tools for driving operational excellence.
- Skills to improve efficiency, reliability, and sustainability.
- Confidence to manage operational challenges effectively.
- Strategic insights for applying digital transformation in petroleum operations.

Course Agenda (Bilingual A/E):

(1st Day) Agenda

8.30	9.00	Opening Remarks (30 Min.).
9.00	11.30	<u>Discuss Course Major Points:</u> • Introduction to Petroleum Operations. • Framework of Operational Excellence. • Production & Processing Operations. • Maintenance, Reliability & Asset Management. • Safety, Environment, Sustainability & Digital Transformation.
11.30	12.00	Coffee Break
12.00	14.00	<u>Introduction to Petroleum Operations:</u> • Petroleum value chain: upstream, midstream, downstream. • Global operational challenges and industry dynamics. • Benchmarking operational excellence: case examples from leading companies. • Case study: Comparing ExxonMobil and Saudi Aramco operational frameworks.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(2nd Day) Agenda

9.00	11.30	<u>Framework of Operational Excellence:</u> • Principles of Lean operations in oil & gas. • Six Sigma tools for efficiency and quality. • Key Performance Indicators (KPIs) in petroleum operations.
11.30	12.00	Coffee Break
12.00	14.00	<u>Framework of Operational Excellence:</u> • Risk-based management and decision-making. • Workshop: Mapping operational processes and identifying inefficiencies.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(3rd Day) Agenda

9.00	11.30	<u>Production & Processing Operations:</u> • Production management and system optimization. • Enhanced Oil Recovery (EOR) methods. • Refining and petrochemical operations.
11.30	12.00	Coffee Break
12.00	14.00	<u>Production & Processing Operations:</u> • Energy management in processing facilities. • Group exercise: Resolving a production bottleneck scenario.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(4th Day) Agenda

9.00	11.30	<u>Maintenance, Reliability & Asset Management:</u> • Preventive vs. predictive maintenance strategies. • Reliability-Centered Maintenance (RCM). • Asset lifecycle management frameworks.
11.30	12.00	Coffee Break
12.00	14.00	<u>Maintenance, Reliability & Asset Management:</u> • Techniques for reducing downtime and equipment failures. • Case study: Predictive maintenance in offshore platforms.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(5th Day) Agenda

9.00	11.30	<u>Safety, Environment, Sustainability & Digital Transformation:</u> • HSE management systems (ISO, OSHA, API standards). • Reducing carbon footprint and emissions. • Sustainability initiatives in petroleum operations.
11.30	12.00	Coffee Break
12.00	14.00	<u>Safety, Environment, Sustainability & Digital Transformation:</u> • Digital transformation: AI, IoT, SCADA, and Digital Twin technologies. • Future trends in operational excellence and energy transition. • Final workshop: Designing an operational excellence roadmap for a petroleum company.
14.00	14.30	Questions, Discussion & Conclusion Training Course.
14.30		Buffet Lunch