AMERICAN GLOBAL INSTITUTE
FOR PRIVATE TRAINING

External Training Course

Welding and Petroleum Mechanics for Technical Coordinators

From 19 May To 23 May 2025
From 07 Jul. To 11 Jul. 2025
From 15 Sep. To 19 Sep. 2025

Sheraton Khalidiya Hotel
Abu Dhabi - UAE

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External Training Course:

Welding and Petroleum Mechanics for Technical Coordinators

From 19 May To 23 May 2025 **Fees: 1500 KD**
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Course Overview

The Welding and Petroleum Mechanics for Technical Coordinators course is designed to provide technical coordinators, assistant engineers, and field supervisors with a practical foundation in welding and mechanical systems used in the oil and gas industry. As operations grow in complexity and scale, technical coordinators play a pivotal role in ensuring seamless communication between engineers, technicians, and contractors. This 5-day intensive course bridges the gap between field activities and management expectations, offering participants the technical insight needed to understand, supervise, and coordinate welding operations and mechanical maintenance tasks. Through a mix of theory, real-world examples, and interactive exercises, the course enables participants to contribute confidently to safe, efficient, and high-quality petroleum operations.

Course Introduction

In today's oil and gas industry, technical coordinators must be more than just administrators—they must understand the core operations they support. This course introduces the fundamentals of welding techniques (such as SMAW, TIG, MIG) and explores key petroleum mechanical systems like pumps, valves, and pipelines. Participants will learn how to interpret technical drawings, identify common equipment faults, and ensure that all work complies with industry standards and safety regulations. By the end of the course, participants will not only understand the technical language and processes used in field operations but will also be better equipped to plan tasks, monitor progress, and communicate effectively with multidisciplinary teams.

Course Objectives

Introduce participants to the fundamentals of welding techniques used in the petroleum industry.

Equip coordinators with sufficient technical knowledge to understand the operation of mechanical systems in oil and gas facilities.

Enable effective coordination between maintenance teams, technicians, and engineers.

Enhance supervisory and follow-up capabilities related to welding and mechanical maintenance in line with safety and quality standards.

Training Methodology

Instructor-led presentations and real-world case studies.

Group discussions and interactive problem-solving sessions.

Hands-on exercises and visual diagnostic tools.

Practical tips, field checklists, and troubleshooting templates.

Course Outline

Day 1: Introduction to Industrial Welding

- Types of welding (SMAW, TIG, MIG, FCAW).
- Welding applications in the petroleum industry.
- Safety procedures during welding operations.

Day 2: Welding Materials and Equipment

- Metals and alloys used in pipelines and tanks.
- Welding machines and modern technologies.
- Common welding defects and inspection techniques.

Day 3: Basics of Petroleum Mechanics

- Key mechanical systems in oil and gas operations.
- Overview of pumps, valves, pipelines, and heat exchangers.
- Introduction to reading mechanical drawings and schematics.

Day 4: Role of the Technical Coordinator

- Planning and daily follow-up of welding and maintenance activities.
- Communication and coordination between technical teams and management.
- Preparing work reports and technical inspection summaries.

Day 5: Practical Applications & Case Studies

- Real-world case studies in welding and maintenance coordination.
- Group exercises and role-based scenarios.
- Final assessment and group discussion.

Course Agenda:

(1st Day) Agenda

8.30	9.00	Opening Remarks (30 Min.).
9.00	11.30	DISCUSS COURSE OBJECTIVES: • Introduction to Industrial Welding. • Welding Materials and Equipment. • Basics of Petroleum Mechanics. • Role of the Technical Coordinator. • Practical Applications & Case Studies.
11.30	12.00	Coffee Break
12.00	14.00	Introduction to Industrial Welding: • Types of welding (SMAW, TIG, MIG, FCAW). • Welding applications in the petroleum industry. • Safety procedures during welding operations.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(2nd Day) Agenda

9.00	11.30	Welding Materials and Equipment • Metals and alloys used in pipelines and tanks. • Welding machines and modern technologies.
11.30	12.00	Coffee Break
12.00	14.00	Welding Materials and Equipment • Common welding defects and inspection techniques. • Group exercises and role-based scenarios.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(3rd Day) Agenda

9.00	11.30	Basics of Petroleum Mechanics: • Key mechanical systems in oil and gas operations. • Overview of pumps, valves, pipelines, and heat exchangers.
11.30	12.00	Coffee Break
12.00	14.00	Basics of Petroleum Mechanics: • Introduction to reading mechanical drawings and schematics. • Group exercises and role-based scenarios.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(4th Day) Agenda

9.00	11.30	Role of the Technical Coordinator: • Planning and daily follow-up of welding and maintenance activities. • Communication and coordination between technical teams and management.
11.30	12.00	Coffee Break
12.00	14.00	Role of the Technical Coordinator: • Preparing work reports and technical inspection summaries. • Group exercises and role-based scenarios.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(5th Day) Agenda

9.00	11.30	Practical Applications & Case Studies: • Real-world case studies in welding and maintenance coordination. • Group exercises and role-based scenarios.
11.30	12.00	Coffee Break
12.00	14.00	Practical Applications & Case Studies: • Final assessment and group discussion.
14.00	14.30	Questions, Discussion & Conclusion Training Course.
14.30		Buffet Lunch