



Digital Transformation and Innovation

Sustainable Solutions and Best Practice Digital Technologies for Production

Course Introduction

This course explores the latest sustainable solutions and digital technologies used in production boosting, with a focus on pumps and compressors. Participants will gain insights into optimizing system efficiency, reducing energy consumption, and integrating smart technologies to enhance operational performance while minimizing environmental impact.

Training Methodology:

- Interactive classroom lectures and technical discussions
- Case studies from industry leaders in oil & gas
- Hands on exercises using digital simulation tools
- Real world troubleshooting techniques
- Best practice frameworks for sustainable production boosting

Target Audience

- Mechanical & Rotating Equipment Engineers
- Process Engineers
- Senior Production Engineers
- Asset Integrity Managers
- Operations & Maintenance Engineers
- Sustainability & Energy Efficiency Specialists
- R&D Professionals in Oil & Gas

Learning Objectives

- Understand sustainable solutions and digital technologies for pump and compressor optimization
- Apply best practices in pump and compressor design, operation, and selection
- Utilize advanced monitoring and performance analysis techniques
- Optimize energy consumption and reduce emissions in production systems
- Develop cost effective, environmentally sustainable production boosting strategies

Course Outline

- **DAY 01**

Fundamentals of Production Boosting & Sustainability

- Overview of artificial lift methods and production boosting techniques
- Fundamentals of pump and compressor operation
- Key performance indicators (KPIs) for production optimization
- Environmental and economic considerations in oil & gas sustainability

- **Day 02**

Sustainable Pumping Technologies & Design

- Energy efficient pump technologies (e.g., ESPs, PCPs, multiphase pumps)
- Optimizing pump design for reduced energy consumption
- Life cycle assessment (LCA) of pump systems
- Case studies of sustainable pump applications

- **Day 03**

Sustainable Compressor Technologies & Digital Innovations

- Energy efficient compressor technologies (e.g., centrifugal, reciprocating)
- Waste heat recovery & emissions reduction techniques
- Industrial Internet of Things (IIoT) applications for real time monitoring
- Advanced analytics, AI, and predictive maintenance for performance optimization

• Day 04

Troubleshooting & Performance Analysis

- Diagnosing common pump and compressor issues (e.g., cavitation, surge, fouling)
- Performance testing and data interpretation
- Troubleshooting strategies for system failures
- Best practices for extending equipment lifespan

• Day 05

Economic & Environmental Impact Assessment

- Cost benefit analysis of sustainable production boosting technologies
- Investment decision making & risk assessment
- Environmental compliance and mitigation strategies
- Case studies of economic and environmental impact assessments

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
May 19, 2025	May 23, 2025	5 days	4950.00 \$	Netherlands - Amsterdam
Sept. 15, 2025	Sept. 19, 2025	5 days	4250.00 \$	UAE - Dubai
Nov. 24, 2025	Nov. 28, 2025	5 days	4250.00 \$	UAE - Abu Dhabi