Offshore Chemical Processing Systems Training Course

Professional Development Training Course Outline

Category	General Training	**Duration**	010 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

The Offshore Chemical Processing Systems Training Course is designed to provide participants with comprehensive knowledge of modern offshore chemical processing technologies, production optimization strategies, process safety management, and environmental compliance requirements. As offshore oil and gas operations become increasingly complex, organizations require highly skilled professionals capable of managing chemical injection systems, process separation technologies, flow assurance programs, corrosion mitigation, production chemistry, digital monitoring systems, and sustainable offshore operations. This course delivers industry-leading knowledge aligned with global best practices and emerging technological innovations.

Participants will gain practical expertise in offshore process engineering, production chemistry optimization, flow assurance management, chemical treatment programs, asset integrity management, process automation, operational excellence, risk mitigation, predictive maintenance, digital transformation, carbon reduction strategies, and environmental stewardship. Through real-world case studies, simulation exercises, and performance improvement projects, attendees will develop the competencies necessary to improve operational efficiency, reduce downtime, enhance safety performance, and maximize offshore production reliability.

Programme Curriculum

Offshore Chemical Processing Systems Training Course

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Course Objectives

Upon completion of this training program, participants will be able to:

1. Understand advanced **Offshore Chemical Processing Systems** architecture and operations.
2. Optimize **Production Chemistry Management** for offshore assets.
3. Implement effective **Flow Assurance Strategies** for subsea and topside systems.
4. Design and manage **Chemical Injection Systems** for production optimization.
5. Apply advanced **Corrosion Control and Integrity Management** techniques.
6. Improve **Produced Water Treatment Technologies** and environmental compliance.
7. Analyze and troubleshoot **Separation Process Performance** issues.
8. Implement **Digital Oilfield Technologies** for process monitoring.
9. Enhance **Asset Reliability and Predictive Maintenance Programs**.
10. Develop **Process Safety Management (PSM)** and risk reduction strategies.
11. Integrate **Automation and Smart Process Control Systems**.
12. Support **Energy Efficiency and Carbon Reduction Initiatives**.
13. Execute best practices in **Operational Excellence and Offshore Sustainability**.

Target Audience

1. Offshore Process Engineers
2. Production Engineers
3. Chemical Engineers
4. Operations Supervisors
5. Production Chemists
6. Integrity and Corrosion Engineers
7. Maintenance Engineers
8. HSE and Asset Reliability Professionals

Coure Modules

Module 1: Fundamentals of Offshore Chemical Processing Systems

- Offshore production system overview
- Chemical processing chain fundamentals
- Offshore facility configurations

- Process flow fundamentals
- Industry standards and regulations
- **Case Study:** Optimization of a North Sea offshore processing facility.

Module 2: Offshore Production Chemistry

- Production chemistry principles
- Reservoir fluid characteristics
- Hydrocarbon phase behavior
- Chemical treatment selection
- Production chemistry monitoring
- **Case Study:** Production chemistry enhancement in a deepwater field.

Module 3: Flow Assurance Management

- Hydrate formation mechanisms
- Wax deposition control
- Asphaltene management
- Scale prevention techniques
- Flow assurance monitoring
- **Case Study:** Mitigating hydrate blockage in subsea pipelines.

Module 4: Chemical Injection Systems

- Injection system design
- Chemical storage requirements
- Injection pump technologies
- Dosing optimization methods
- System reliability enhancement
- **Case Study:** Chemical injection optimization on an FPSO.

Module 5: Corrosion Control and Mitigation

- Corrosion mechanisms offshore
- Corrosion inhibitors
- Monitoring technologies
- Cathodic protection systems
- Integrity management programs
- **Case Study:** Corrosion reduction strategy implementation.

Module 6: Scale and Deposit Management

- Scale formation mechanisms
- Scale prediction software
- Chemical treatment methods
- Monitoring and diagnostics
- Removal technologies
- **Case Study:** Offshore scale mitigation project.

Module 7: Produced Water Treatment Systems

- Produced water characteristics

- Separation technologies
- Treatment chemical programs
- Discharge regulations
- Water quality monitoring
- **Case Study:** Produced water compliance improvement initiative.

Module 8: Offshore Separation Processes

- Three-phase separation principles
- Separator optimization
- Emulsion treatment
- Process troubleshooting
- Performance monitoring
- **Case Study:** Separator efficiency improvement program.

Module 9: Process Safety Management

- Offshore process hazards
- Risk assessment techniques
- HAZOP methodology
- Barrier management
- Emergency response planning
- **Case Study:** Major process safety incident analysis.

Module 10: Process Automation and Control

- Offshore control architectures
- SCADA and DCS systems
- Advanced process control
- Instrumentation fundamentals
- Digital monitoring platforms
- **Case Study:** Digital process control implementation.

Module 11: Asset Integrity Management

- Integrity management frameworks
- Inspection planning
- Reliability-centered maintenance
- Failure analysis techniques
- Lifecycle management
- **Case Study:** Asset integrity optimization program.

Module 12: Environmental Compliance and Sustainability

- Environmental regulations
- Emission reduction strategies
- Chemical environmental risk assessment
- Waste minimization programs
- Sustainability initiatives
- **Case Study:** Offshore environmental compliance transformation.

Module 13: Operational Excellence and Performance Optimization

- KPI development
- Production optimization tools
- Root cause analysis
- Continuous improvement methodologies
- Benchmarking techniques
- **Case Study:** Offshore production performance enhancement.

Module 14: Emerging Technologies in Offshore Chemical Processing

- Artificial Intelligence applications
- Digital twins
- Predictive analytics
- Smart chemical systems
- Remote operations technologies
- **Case Study:** AI-driven production chemistry optimization.

Module 15: Integrated Offshore Chemical Processing Project

- End-to-end process evaluation
- Risk assessment workshop
- Chemical management planning
- Optimization strategy development
- Final project presentation
- **Case Study:** Comprehensive offshore facility chemical processing improvement project.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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