FPSO Integrity Management Training Course

Professional Development Training Course Outline

Category	Oil and Gas	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Floating Production Storage and Offloading (FPSO) vessels are critical infrastructure in offshore oil and gas production, combining complex mechanical, structural, and marine systems. FPSO Integrity Management Training Course provides a deep dive into managing the operational health and long-term reliability of FPSO units. Participants will gain essential knowledge on asset integrity, risk-based inspection (RBI), corrosion control, structural monitoring, and life extension strategies using real-world tools and standards. The course empowers professionals with industry best practices, digital monitoring, and compliance frameworks that align with global regulations and safety benchmarks.

The dynamic and evolving offshore environment requires a robust integrity management system to ensure safety, uptime, and compliance of FPSOs. This course uses case-driven learning to emphasize proactive and predictive techniques, minimizing downtime and increasing asset lifespan. With a focus on digital transformation, condition-based monitoring, and lifecycle integrity planning, this training is ideal for professionals involved in operations, inspection, and maintenance across upstream offshore assets.

Programme Curriculum

FPSO Integrity Management Training Course

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Course Objectives

1. Understand the principles and scope of FPSO integrity management.
2. Apply asset lifecycle integrity strategies specific to FPSO operations.
3. Identify structural integrity challenges in offshore floating systems.
4. Develop corrosion management plans for marine and topside systems.
5. Implement risk-based inspection (RBI) methodologies for FPSOs.
6. Integrate digital tools and sensors for real-time condition monitoring.
7. Design inspection and maintenance plans for hull and mooring systems.
8. Analyze fatigue, cracking, and aging mechanisms affecting integrity.
9. Address regulatory and classification society requirements.
10. Apply emergency preparedness and incident mitigation plans.
11. Plan for FPSO life extension, upgrades, and redeployment.
12. Use data-driven decision-making for asset integrity optimization.
13. Develop a holistic FPSO integrity management system (IMS).

Target Audience

1. Offshore Asset Managers
2. Integrity and Inspection Engineers
3. Marine Structural Engineers
4. HSE Professionals
5. Operations and Maintenance Supervisors
6. Naval Architects
7. Regulatory Compliance Officers
8. Technical Consultants in Oil & Gas

Course Duration: 5 days

Course Modules

Module 1: Fundamentals of FPSO Integrity Management

- Overview of FPSO systems and critical components
- Role of integrity in offshore operations
- Integrity assurance lifecycle
- Common degradation and failure modes
- Regulatory frameworks (IMO, ABS, DNV, API)
- **Case Study:** Integrity failure incident in a West Africa FPSO

Module 2: Hull and Marine Structural Integrity

- Inspection techniques for hull and turret
- Fatigue analysis and stress assessment
- Non-destructive testing (NDT) applications
- Hull gauging and thickness measurements
- Structural health monitoring systems
- **Case Study:** Mooring failure risk assessment in a Brazilian FPSO

Module 3: Corrosion Management Strategies

- Corrosion mechanisms in FPSOs
- Cathodic protection and coatings
- Internal corrosion monitoring
- Materials selection and compatibility
- Corrosion Risk Assessment (CRA)
- **Case Study:** Corrosion control strategy success in North Sea FPSO

Module 4: Risk-Based Inspection and Maintenance (RBI/RBM)

- RBI methodology and planning
- Risk ranking and prioritization
- Maintenance optimization techniques
- Integration with CMMS systems
- Reliability-centered maintenance (RCM)
- **Case Study:** RBI-based overhaul plan for an aging FPSO unit

Module 5: Mooring and Turret Integrity Management

- Mooring line configuration and wear analysis
- Turret system inspections
- Anchor leg integrity checks
- Dynamic positioning systems and redundancy
- Response to mooring system failures
- **Case Study:** Turret misalignment root cause investigation

Module 6: Topsides and Process Systems Integrity

- Integrity of pressure vessels and pipelines
- Process hazard analysis (PHA)
- Leak detection and safety systems
- Integrity assurance during shutdowns
- Fire and explosion risk management
- **Case Study:** Process system integrity audit in Malaysian FPSO

Module 7: Digital Tools and Data-Driven Monitoring

- Digital twin technology for FPSO
- Use of drones and robotics in inspections
- Real-time data analytics and dashboards
- Predictive analytics for asset health
- Integration with cloud-based IMS platforms
- **Case Study:** Digital monitoring rollout in a West African FPSO fleet

Module 8: FPSO Life Extension and Redeployment Planning

- End-of-life assessment protocols
- Upgrading systems for redeployment
- Classification society re-certification
- Life extension risk analysis
- Redeployment feasibility case studies
- **Case Study:** Redeployment and refit of an Asian FPSO unit

Training Methodology

- Instructor-led interactive sessions

- Real-world case studies and simulations
- Group discussions and problem-solving exercises
- Hands-on demonstrations of digital tools
- Knowledge checks, quizzes, and assessments
- Final group project presentation on FPSO integrity strategy

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	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com