Marine Asset Integrity Management Training Course

Professional Development Training Course Outline

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

Course Introduction

In today's highly demanding offshore and marine environments, ensuring the long-term reliability, safety, and performance of marine assets is not just a priority—it is a necessity. Marine Asset Integrity Management Training Course is a specialized, industry-driven program tailored to equip professionals with the knowledge, tools, and strategies required to implement world-class integrity management systems. This training blends technical expertise with strategic asset lifecycle planning, regulatory compliance, and real-time risk mitigation—empowering participants to reduce downtime, prevent catastrophic failures, and optimize operational efficiency in harsh marine settings.

With increasing regulatory scrutiny, aging infrastructure, and rising operational risks, marine companies require skilled professionals who can proactively manage asset integrity through data analytics, predictive maintenance, corrosion control, and digital transformation. This course is ideal for professionals across engineering, inspection, operations, and safety disciplines, seeking to align their competencies with global best practices and the evolving demands of the offshore energy, shipping, and maritime sectors.

Programme Curriculum

Marine Asset Integrity Management Training Course

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Course Objectives

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

1. Understand core principles of asset integrity management in marine environments
2. Identify key failure modes and risk factors for offshore and marine assets
3. Implement effective corrosion monitoring and control strategies
4. Utilize digital twin technology and predictive analytics in integrity assessments
5. Interpret and apply relevant industry standards (API, ISO, DNV)
6. Develop and implement Risk-Based Inspection (RBI) programs
7. Integrate structural health monitoring (SHM) systems for offshore structures
8. Analyze condition-based maintenance (CBM) techniques
9. Design and manage inspection, repair, and maintenance (IRM) schedules
10. Apply principles of life cycle cost optimization for asset longevity
11. Enhance regulatory compliance and environmental protection
12. Use real-time data acquisition systems for informed decision-making
13. Conduct comprehensive asset integrity audits and reporting

Target Audience

This training is specifically designed for:

1. Marine engineers and offshore facility managers
2. Corrosion and materials engineers
3. Structural and subsea engineers
4. Health, Safety & Environment (HSE) professionals
5. Asset integrity and reliability engineers
6. Operations and maintenance supervisors
7. Marine surveyors and inspection personnel
8. Project managers in oil & gas and maritime sectors

Course Duration: 5 days

Course Modules

Module 1: Fundamentals of Marine Asset Integrity

- Definition and importance of marine asset integrity
- Key components and systems in offshore environments
- Asset lifecycle phases and degradation mechanisms
- Overview of international standards (API, DNV, ISO)
- Tools and technologies for integrity assurance
- **Case Study: Integrity challenges on aging FPSOs**

Module 2: Corrosion Management in Marine Systems

- Types of corrosion in marine environments
- Cathodic protection systems and coatings
- Corrosion Under Insulation (CUI) strategies

- Corrosion risk assessment and monitoring
- Inspection and mitigation planning
- **Case Study: Corrosion control on subsea pipelines**

Module 3: Risk-Based Inspection (RBI) Strategies

- RBI principles and methodologies
- Probability vs. consequence of failure
- Data collection and risk assessment tools
- Prioritizing inspection schedules
- Integration with asset management systems
- **Case Study: RBI implementation on offshore platforms**

Module 4: Structural Health Monitoring (SHM)

- Sensors and IoT in structural integrity
- Vibration, displacement, and crack monitoring
- Real-time data interpretation
- Integration with maintenance management
- SHM for floating structures (FPSO, semi-submersibles)
- **Case Study: SHM deployment on tension-leg platforms**

Module 5: Digitalization and Predictive Analytics

- Introduction to digital twins in asset management
- AI/ML applications in asset health prediction
- Predictive maintenance models
- Condition-based monitoring tools
- Integrating digital workflows into operations
- **Case Study: Predictive analytics for offshore wind farms**

Module 6: Inspection, Repair, and Maintenance (IRM)

- Inspection planning and techniques (ROVs, UAVs)
- Repair technologies and intervention methods
- Maintenance optimization techniques
- Data-driven IRM scheduling
- Reporting and documentation standards
- **Case Study: IRM execution on subsea manifolds**

Module 7: Integrity Governance and Compliance

- Regulatory bodies and compliance frameworks
- ISO 55000 and asset governance principles
- Integrity audit planning and execution
- Role of leadership in integrity culture
- Reporting to stakeholders and regulators
- **Case Study: Compliance audit on marine terminals**

Module 8: Life Cycle Costing and Asset Sustainability

- Cost-benefit analysis of integrity programs
- Sustainability in marine asset management
- Decision-making models for asset replacement
- Long-term value optimization
- Enhancing ROI through reliability engineering

- **Case Study: Lifecycle costing of offshore risers**

Training Methodology

- Interactive instructor-led presentations
- Real-life case studies and scenario simulations
- Group discussions and peer learning activities
- Hands-on tools and templates for asset management
- Quizzes, feedback sessions, and post-training assessments

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

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$4,500
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