Wind Farm Construction Management Training Course

Professional Development Training Course Outline

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

Course Introduction

Wind Farm Construction Management Training Course provides a practical, industry-focused framework for professionals responsible for planning, coordinating, executing, and controlling modern onshore and offshore wind farm construction projects. As the wind sector expands and employers increasingly seek advanced technical and digital capabilities, effective construction managers need expertise spanning project lifecycle management, EPC delivery, construction planning, scheduling, cost control, procurement, HSE, quality assurance, logistics, stakeholder management, risk management, and commissioning. Current industry research highlights growing demand for skilled renewable-energy workers and advanced digital skills, while digital twins, AI, data analytics, and predictive technologies are becoming increasingly important across wind-energy operations.

The course combines construction management theory, practical exercises, project simulations, industry case studies, risk scenarios, and technology-enabled learning to help participants manage complex wind projects from development and mobilization through construction, installation, testing, commissioning, and handover. Particular attention is given to schedule optimization, critical-path management, supply-chain resilience, marine and land logistics, contractor coordination, environmental compliance, digital project controls, safety leadership, and data-driven decision-making. Case-based learning reflects established approaches in offshore-wind project-management education, where planning, scheduling, risk, scope, procurement, stakeholder management, and lessons learned are central themes.

Programme Curriculum

Wind Farm Construction Management Training Course

Introduction

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Course Duration

5 days

Course Objectives

1. Develop advanced wind farm construction project-management capabilities across the complete project lifecycle.
2. Apply EPC/EPCM and construction-delivery strategies to utility-scale wind projects.
3. Master construction planning, work breakdown structures, scheduling, milestones, and critical-path analysis.
4. Strengthen cost management, budgeting, forecasting, and earned-value management skills.
5. Implement effective contract management, procurement, vendor management, and supply-chain resilience strategies.
6. Apply modern HSE leadership, risk assessment, permit-to-work, and construction safety principles.
7. Manage quality assurance, quality control, inspection, testing, and non-conformance management.
8. Coordinate turbine transportation, heavy lifting, site logistics, marine logistics, and installation sequencing.
9. Use digital project controls, BIM/GIS, SCADA data, cloud collaboration, AI analytics, and digital twins to improve project visibility.
10. Strengthen stakeholder engagement, contractor coordination, communication, and multidisciplinary team leadership.
11. Develop strategies for weather risk, environmental constraints, permitting, community engagement, and regulatory compliance.
12. Improve commissioning, handover, documentation, punch-list management, and project closeout.
13. Evaluate emerging floating wind, autonomous systems, AI-enabled optimization, and smart renewable-energy construction trends.

Target Audience

1. Wind Farm Project Managers

2. Construction Managers and Site Managers
3. Renewable Energy Engineers
4. Civil, Electrical, Mechanical and Structural Engineers
5. EPC/EPCM Contractors and Project Controls Professionals
6. Procurement, Supply-Chain and Logistics Managers
7. HSE, Quality and Environmental Professionals
8. Government, Utility, Developer, Investor and Energy-Transition Professionals

Course Modules

Module 1: Wind Farm Development & Construction Lifecycle

- Wind farm development stages
- Onshore versus offshore construction-management requirements
- Project organization, governance, roles and responsibilities
- **WBS, project controls, stage gates and construction readiness**
- **Case Study:** Lessons learned from a major offshore wind project lifecycle

Module 2: Construction Planning, Scheduling & Project Controls

- **Baseline schedules, Gantt charts, CPM and critical-path analysis**
- Resource-loaded schedules and productivity management
- Milestones, look-ahead planning and progress measurement
- **Earned Value Management (EVM)** and performance dashboards
- **Case Study:** Recovering a wind farm project experiencing schedule slippage

Module 3: Cost, Contracts, Procurement & Supply Chain

- Construction budgets, cost forecasting and cost-control systems
- **EPC, EPCM, BoP and multi-contracting strategies**
- Tendering, supplier evaluation and contract administration
- Global supply-chain risks, long-lead equipment and logistics resilience
- **Case Study:** Managing turbine-component delays and supplier disruption

Module 4: HSE, Risk & Environmental Management

- **HSE leadership, risk registers, JSA/JHA and construction safety**
- Emergency preparedness and contractor safety management
- Environmental and social impact considerations
- Weather, marine, lifting, transport and site-interface risks
- **Case Study:** Building a risk-response plan for adverse-weather construction delays

Module 5: Wind Turbine, Civil & Electrical Construction

- Foundations, roads, crane pads and balance-of-plant construction
- Turbine component delivery, erection and heavy-lift coordination
- Electrical collection systems, substations and grid connection
- Installation sequencing, interface management and quality inspections
- **Case Study:** Coordinating civil, electrical and turbine-installation workstreams

Module 6: Digital Construction & Smart Wind Farm Technologies

- **BIM, GIS, cloud collaboration and digital project controls**
- **Digital twins** for asset visibility, planning and lifecycle management
- AI, machine learning and predictive analytics for project decision-making
- Drones, IoT, sensors and real-time progress monitoring
- **Case Study:** Applying a digital-twin approach to improve wind-farm asset management; recent research identifies digital twins as an important frontier for wind-energy lifecycle management.

Module 7: Logistics, Stakeholders & Construction Interfaces

- Heavy-haul transportation and **last-mile logistics**
- Port, vessel, marine and offshore installation coordination
- Contractor, supplier and multidisciplinary interface management
- Community, regulator, landowner and stakeholder engagement
- **Case Study:** Resolving logistics and stakeholder-interface challenges on a large wind project

Module 8: Commissioning, Handover & Future Wind Projects

- Mechanical completion, testing and **commissioning management**
- Punch lists, quality dossiers, as-built documentation and handover
- Performance testing, acceptance criteria and project closeout
- Lessons learned, operational readiness and lifecycle optimization
- **Case Study:** Transitioning a completed wind farm from construction to operations and maintenance

Training Methodology

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

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
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:

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