Training Course on Integrated Reservoir Management

Professional Development Training Course Outline

Category	Oil and Gas	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today's energy-driven world, Integrated Reservoir Management (IRM) is crucial for maximizing hydrocarbon recovery, enhancing field development strategies, and minimizing operational costs. Training Course on Integrated Reservoir Management empowers professionals to master the synergy between geoscience, engineering, and economics to efficiently manage oil and gas reservoirs. Through innovative reservoir characterization, dynamic simulation, and interdisciplinary collaboration, participants will gain cutting-edge expertise to drive asset value in both conventional and unconventional plays.

The course bridges the gap between theoretical knowledge and field applications, leveraging real-world case studies, advanced analytics, and digital oilfield tools. With a focus on sustainability, digital transformation, and performance optimization, this program aligns with current industry standards and future demands. Participants will leave with practical skills applicable across upstream sectors, from exploration and production to development planning and reservoir optimization.

Programme Curriculum

Training Course on Integrated Reservoir Management

Introduction

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Course Objectives

1. Understand the fundamentals of integrated reservoir management workflows.
2. Analyze multidisciplinary data integration for effective decision-making.
3. Apply reservoir simulation models for field development optimization.
4. Evaluate enhanced oil recovery (EOR) methods using advanced tools.
5. Incorporate real-time monitoring and digital oilfield applications.
6. Optimize production forecasting and decline curve analysis.
7. Improve asset performance using data-driven decision-making.
8. Explore the impact of AI and machine learning in reservoir management.
9. Apply economic evaluation techniques in reservoir projects.
10. Develop collaborative strategies for cross-functional reservoir teams.
11. Assess the challenges in reservoir uncertainty and risk management.
12. Understand CO2 storage and carbon capture integration in mature fields.
13. Build skills for sustainable field development planning.

Target Audiences

1. Reservoir Engineers
2. Geoscientists and Geologists
3. Production Engineers
4. Petroleum Economists
5. Field Development Planners
6. Oil & Gas Project Managers
7. Energy Consultants
8. Government Regulators and Policy Makers

Course Duration: 10 days

Course Modules

Module 1: Introduction to Integrated Reservoir Management

- Definition and Scope of IRM
- Importance of Integration in Upstream Operations
- Key Stakeholders in IRM Teams
- Benefits of IRM in Field Optimization
- IRM Lifecycle Overview
- **Case Study: Implementation of IRM in a Mature Oil Field in the Middle East**

Module 2: Reservoir Characterization

- Geological and Geophysical Data Integration
- Petrophysical Analysis Techniques
- Structural and Stratigraphic Interpretation
- Rock Typing and Facies Modeling
- Static Modeling Tools
- **Case Study: 3D Reservoir Modeling for a Deepwater Field in Brazil**

Module 3: Reservoir Simulation and Modeling

- Introduction to Reservoir Simulators
- Building Simulation Models
- History Matching Techniques
- Model Validation and Uncertainty
- Simulation for Forecasting and Planning
- **Case Study: Simulation-Driven Decision for a North Sea Reservoir**

Module 4: Production Data Analysis

- Decline Curve Analysis (DCA)
- Material Balance Techniques
- Production Logging Tools
- Well Performance Evaluation
- Production Optimization Strategies
- **Case Study: Decline Curve Application in Tight Gas Reservoirs**

Module 5: Field Development Planning

- Field Development Workflow
- Scenario-Based Planning
- Well Placement Optimization
- Facility Planning and Integration
- Cost-Risk Analysis
- **Case Study: Integrated FDP for an Onshore Reservoir in West Africa**

Module 6: Enhanced Oil Recovery (EOR)

- EOR Screening Criteria
- Chemical, Thermal, and Gas Injection Methods
- Field Trials and Pilot Testing
- Surveillance and Monitoring
- Economics of EOR Projects
- **Case Study: Polymer Flooding Success in a Canadian Oil Field**

Module 7: Unconventional Reservoir Management

- Characteristics of Shale and Tight Reservoirs
- Fracturing Techniques and Design
- Horizontal Well Strategies
- EUR Estimation in Unconventionals
- Integrated Completion and Production Planning
- **Case Study: Shale Oil Management in the Permian Basin**

Module 8: Digital Oilfield Applications

- Role of IoT in Reservoir Management
- SCADA and Remote Monitoring
- Digital Twins in Reservoir Modeling
- Predictive Analytics and AI
- Workflow Automation
- **Case Study: Real-Time Optimization in a Smart Field in Kuwait**

Module 9: Multidisciplinary Collaboration in IRM

- Building Cross-Functional Teams

- Communication and Knowledge Sharing
- Decision-Making Frameworks
- Roles of Engineers, Geologists, and Economists
- Collaboration Tools and Platforms
- **Case Study: Integrated Team Success in the North Slope Project**

Module 10: Uncertainty and Risk Management

- Types of Reservoir Uncertainties
- Probabilistic Modeling
- Risk Mitigation Planning
- Sensitivity Analysis
- Project Value Under Uncertainty
- **Case Study: Risk-Based Portfolio Optimization in Indonesia**

Module 11: Economic Evaluation of Reservoir Projects

- Cash Flow and NPV Calculations
- Sensitivity and Scenario Analysis
- Investment Decision Criteria
- Fiscal Regime Impacts
- Portfolio Evaluation Tools
- **Case Study: NPV Optimization in Offshore Angola Development**

Module 12: Reservoir Monitoring Techniques

- Surveillance Plan Design
- Time-Lapse Seismic (4D)
- Well Testing and Pressure Monitoring
- Data Acquisition Systems
- Integration into Models
- **Case Study: 4D Seismic Monitoring in Norwegian Fields**

Module 13: Carbon Capture and Storage in Reservoirs

- CO2 Injection Methods
- Site Selection Criteria
- Storage Capacity Estimation
- Monitoring and Verification
- Regulatory and Safety Concerns
- **Case Study: CCS Integration in a Depleted Gas Reservoir in the UK**

Module 14: Sustainable Reservoir Management

- ESG in Reservoir Projects
- Water and Energy Efficiency
- Emission Reduction Strategies
- Sustainable EOR Methods
- Green Technologies and Best Practices
- **Case Study: Sustainability Framework in a South American Asset**

Module 15: Future Trends in Reservoir Management

- AI and ML Applications
- Automation and Robotics
- Big Data Integration

- Blockchain for Data Security
- Future Workforce Skills
- **Case Study: AI-Powered Reservoir Insights in a Digital Transformation Project**

Training Methodology

- Instructor-led lectures with multimedia presentations
- Interactive group exercises and workshops
- Real-world case study analysis and group presentations
- Simulation software demonstrations and hands-on training
- Q&A sessions with industry experts
- Knowledge assessments and certification exam

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

Start Date	End Date	Location	Price
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

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

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