Advanced Petroleum Engineering & Reservoir Management

11 – 15 January 2027
London (UK)

UK Traininig
PARTNER



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Introduction

Advanced Petroleum Engineering & Reservoir Management is a cornerstone discipline for maximizing the efficient extraction of hydrocarbon resources and enhancing oil field productivity. This comprehensive training program equips participants with advanced knowledge and practical tools to analyze well performance, develop effective reservoir management strategies, and make data-driven decisions that improve production rates and reduce operational costs.
The course is designed for executives, team leaders, engineers, technicians, and petroleum specialists seeking to strengthen their expertise in planning, analysis, and technical reservoir management. Over the span of five intensive days, participants will gain hands-on experience in modeling, simulation, and data analysis, ensuring sustainable operations and maximizing return on investment.

Course Objectives

- Understand the latest technologies in petroleum engineering and reservoir management.
- Apply advanced techniques in well productivity analysis.
- Develop long-term, effective reservoir management strategies.
- Use modeling and simulation tools to support technical decisions.
- Evaluate field performance and enhance recovery rates.
- Plan for increased production while minimizing operating costs.
- Analyze geological and geophysical data to inform decision-making.
- Integrate reservoir management with overall field development plans.

Course Outlines

Day 1: Advanced Petroleum Engineering Concepts

- Review of petroleum engineering fundamentals.
- Latest advancements in drilling and production technologies.
- Rock properties and reservoir characteristics.
- Evaluating well performance using production indicators.
- Role of maintenance and workovers in efficiency improvement.
- Case study: Enhancing output from a low-producing well.



Day 2: Fundamentals of Reservoir Management

- Definition and significance of reservoirs in the production cycle.
- Stages of reservoir development.
- Key performance indicators for reservoirs.
- Collection and analysis of geological data.
- Techniques for improved reservoir management.
- Workshop: Planning management for a new reservoir.

Day 3: Reservoir Modeling and Simulation

- Basics of reservoir modeling.
- Simulation software and analytical tools.
- Building a 3D reservoir model.
- Analyzing different development scenarios.
- Assessing the impact of changes on production.
- Practical exercise on reservoir simulation software.

Day 4: Production Optimization Strategies

- Enhanced oil recovery EOR methods.
- Managing pressures and production rates.
- Water and gas handling techniques.
- Cost-reduction approaches in field operations.
- Performance metrics for optimization plans.
- Case study: Boosting output in a mature field.

Day 5: Final Evaluation and Development Planning

- Comprehensive review of acquired concepts.
- Post-optimization field and reservoir performance analysis.
- Long-term development planning.
- Setting investment priorities for field projects.
- Final project: Full reservoir development plan.
- Course closure and certificate distribution.



Why Attend this Course: Wins & Losses!

- Gain in-depth expertise in petroleum engineering and reservoir management.
- Improve efficiency and maximize return on investment.
- Utilize state-of-the-art modeling and analytical tools.
- Make strategic, data-driven operational decisions.
- Develop effective, practical improvement plans.
- Strengthen collaboration between technical and management teams.
- Earn an industry-recognized certification.
- Gain practical, applicable skills from real-world scenarios.

Conclusion

The Advanced Petroleum Engineering & Reservoir Management course provides a complete and integrated framework for efficient petroleum resource management. By blending theoretical knowledge with practical applications, it enables participants to develop sustainable strategies for increasing production, reducing costs, and leveraging modern technologies for analysis and simulation.

Acquiring these skills not only boosts technical performance but also enhances strategic planning and decision-making capabilities, ensuring long-term success in petroleum projects.

