Email: info@gatewayconsulting.com | Phone: +96522968641
https://gatewayconsulting.com

RESERVOIR MODELING FOR GEOLOGISTS AND ENGINEERS

Start Date:	09/08/2026	**End Date:**	13/08/2026
Categories:	Oil & Gas	**Venues:**	Doha
Formats:	In Person	**Instructors:**	

OVERVIEW

This technical course provides participants with a solid foundation in reservoir modeling principles and practices. It focuses on integrating geological, petrophysical, and engineering data to build dynamic reservoir models that support field development planning, production optimization, and reservoir management decisions across the oil and gas lifecycle.

OBJECTIVES

By the end of this course, participants will be able to: – Understand the key concepts, workflows, and objectives of reservoir modeling. – Integrate geological, petrophysical, and dynamic data into 3D reservoir models. – Construct static and dynamic models to simulate reservoir performance under different scenarios. – Apply modeling techniques to support field development, production forecasting, and recovery optimization. – Interpret and validate model outputs to improve decision-making in reservoir management.

COURSE OUTLINE

1- Fundamentals of Reservoir Modeling and Data Integration 2- Building Geological Frameworks and Static Models 3- Dynamic Simulation: Flow Modeling and Production Forecasting 4- History Matching, Uncertainty Analysis, and Model Validation 5- Practical Applications of Reservoir Models in Field Development Planning

TARGET AUDIENCE

All Supervisory Levels, Reservoir Engineers, Geologists, Geophysicists, Petrophysicists, Production Engineers, Field Development Planners, and technical specialists involved in subsurface modeling, field development, and reservoir management.

METHODOLOGY

The course uses a combination of technical lectures, hands-on reservoir modeling exercises, real-world case studies, group simulation projects, and workflow discussions to provide participants with both theoretical knowledge and practical modeling skills.

CONCLUSION

Upon completion, participants will be capable of constructing, interpreting, and utilizing reservoir models to support exploration, development, and production optimization activities, enhancing field performance and project value.

DAILY AGENDA

Day 1: Introduction to Reservoir Modeling: Concepts and Objectives

Understand the importance of reservoir modeling, types of models, data sources, and workflows involved in model construction.

Day 2: Static Modeling: Building Geological and Petrophysical Frameworks

Learn to create 3D static models by integrating structural, stratigraphic, lithological, and petrophysical data.

Day 3: Dynamic Modeling and Flow Simulation

Develop dynamic models to simulate fluid flow, forecast production, and evaluate reservoir performance under different development scenarios.

Day 4: History Matching, Uncertainty Management, and Model Validation

Apply techniques to match historical production data, assess model uncertainty, and validate simulation outputs for reliable decision-making.

Day 5: Application of Reservoir Models to Field Development and Optimization

Use reservoir models for well placement, production strategy design, EOR planning, and asset management optimization.

For more information, please contact us:
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