



HARNESS THE POWER
OF KNOWLEDGE

Organic Geochemistry Applied to Petroleum Exploration and Modeling

TRAIN



Course Overview

This comprehensive 5-day professional training course will equip you with the essential knowledge and practical skills to effectively apply organic geochemistry to petroleum exploration and modeling. Designed for aspiring and experienced petroleum geologists, geophysicists, and engineers, this course will provide you with a holistic understanding of the principles of organic geochemistry and its application to hydrocarbon exploration and reservoir modeling.

Course Objectives

By the end of this course, you will be able to:

- Thoroughly grasp the fundamental principles of organic geochemistry and its significance in petroleum exploration
- Analyze organic geochemical data to determine source rock characteristics, maturation levels, and hydrocarbon potential
- Apply organic geochemical techniques to identify and evaluate potential petroleum reservoirs
- Utilize organic geochemical data to calibrate basin models and assess hydrocarbon generation and migration
- Effectively communicate organic geochemical findings to stakeholders and decision-makers

Course Agenda

Day 1: Introduction to Organic Geochemistry and Petroleum Systems

- Overview of organic geochemistry and its role in petroleum exploration and production
- Understanding the formation and composition of organic matter in sediments
- The concept of petroleum systems and their components: source rocks, reservoir rocks, and seal rocks

Day 2: Organic Geochemical Analysis Techniques

- Introduction to common organic geochemical analysis techniques, including pyrolysis, chromatography, and spectroscopy
- Analysis of organic matter biomarkers to identify source rocks and assess their hydrocarbon potential
- Determination of organic maturity levels using various organic geochemical parameters

Day 3: Organic Geochemistry in Petroleum Exploration

- Application of organic geochemical data to identify and evaluate potential hydrocarbon source rocks
- Assessment of hydrocarbon generation potential and migration pathways using organic geochemical indicators
- Integration of organic geochemical data with geological and geophysical information for prospect evaluation

Day 4: Organic Geochemistry in Basin Modeling

- Understanding the principles of basin modeling and its role in hydrocarbon exploration
- Calibration of basin models using organic geochemical data to assess hydrocarbon generation and migration
- Interpretation of basin modeling results to predict the distribution and characteristics of hydrocarbon reservoirs

Day 5: Organic Geochemistry in Reservoir Modeling and Production Optimization

- Application of organic geochemical data to characterize reservoir properties and fluid characteristics
- Use of organic geochemistry to optimize reservoir management strategies and enhance hydrocarbon recovery
- Communication and presentation of organic geochemical findings to stakeholders and decision-makers

Who Should Attend

This course is designed for:

- Aspiring and experienced petroleum geologists, geophysicists, and engineers seeking to specialize in organic geochemistry
- Professionals involved in petroleum exploration, reservoir characterization, and production optimization

- Individuals interested in enhancing their understanding of the role of organic geochemistry in hydrocarbon exploration and modeling
- Anyone seeking to expand their expertise in organic geochemical techniques and their application to petroleum industry challenges

Course Benefits

- Gain a comprehensive understanding of organic geochemistry and its principles
- Develop practical skills to analyze organic geochemical data and interpret its significance
- Enhance your ability to apply organic geochemistry to petroleum exploration, modeling, and reservoir management
- Expand your knowledge of organic geochemical techniques and their application to real-world scenarios
- Effectively communicate organic geochemical findings to stakeholders and decision-makers