



— Course details

OG-010

Oil and Gas

— Upcoming seminar

€4,250.-

Venue

Barcelona - Spain

Date

4 - 8 May 2026

— Course details

Uncertainty Modeling & Risk-Based Decision Making in Energy Projects

Oil and Gas

— Seminar content

What you will learn

Why Attend

Energy projects operate under conditions where volatility, technical complexity, and long investment cycles make uncertainty a critical factor in success. Managing this uncertainty effectively requires more than traditional risk registers—it demands structured modeling and disciplined decision frameworks.

This course provides practical techniques to model uncertainty, quantify risk exposure, and support high-impact decisions across the project lifecycle. Participants will learn how to transform uncertain variables into actionable insights, improving confidence in investment, planning, and operational decisions.

Course Methodology

The program is designed to balance theory with practical application through:

- Industry-based case studies from oil, gas, and energy projects
- Guided exercises in uncertainty modeling and risk evaluation
- Group discussions and decision-making simulations
- Step-by-step demonstrations of analytical techniques
- Practical frameworks that can be immediately applied in the workplace

Course Objectives

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

- Model uncertainty using structured quantitative approaches
- Apply risk-based decision-making techniques in complex projects
- Evaluate project scenarios using probabilistic analysis
- Assess the impact of uncertainty on cost, schedule, and performance
- Improve decision quality through data-driven insights
- Integrate uncertainty modeling into project governance and reporting

Target Audience

This course is suitable for:

- Project Managers and Engineers in energy and oil & gas
- Risk and Planning Specialists
- Investment and Financial Analysts
- Operations and Asset Management Professionals
- Decision-makers involved in capital and strategic projects

Target Competencies

Participants will develop capabilities in:

- Uncertainty modeling and probabilistic thinking
- Quantitative risk analysis
- Scenario development and evaluation
- Risk-based decision-making
- Strategic planning under uncertainty

- Communication of risk insights to stakeholders

— Seminar details

Detailed outline

→ Day 1: Foundations of Uncertainty in Energy Projects

- Understanding uncertainty vs. risk in energy environments
- Sources of uncertainty (market, technical, geopolitical, operational)
- Risk management frameworks in energy projects
- Techniques for identifying and structuring uncertainty
- Building a robust risk and uncertainty register
- Qualitative assessment and prioritization

→ Day 2: Quantitative Uncertainty Modeling

- Introduction to probabilistic modeling concepts
- Key statistical tools for uncertainty analysis
- Defining input distributions and assumptions
- Sensitivity analysis and key risk drivers
- Introduction to simulation techniques (e.g., Monte Carlo concepts)
- Interpreting and validating model outputs

→ Day 3: Risk-Based Decision Analysis

- Principles of decision-making under uncertainty
- Decision trees and expected value concepts
- Evaluating alternatives using risk-adjusted metrics
- Risk appetite and decision criteria
- Scenario comparison and trade-off analysis
- Case study: Energy investment decision

→ Day 4: Integrated Risk Modeling for Projects

- Linking cost, schedule, and performance risks
- Modeling dependencies and correlations
- Scenario planning and stress testing
- Risk mitigation strategies and optimization
- Introduction to risk modeling tools (conceptual overview)
- Practical workshop: building an integrated model

Day 5: Embedding Risk-Based Decision Making

- Applying risk insights across the project lifecycle
- Governance and risk reporting frameworks
- Communicating uncertainty to senior stakeholders
- Supporting strategic and operational decisions
- Lessons learned and industry best practices
- Final group exercise and action planning

Dates and locations

Available seminar dates

8 dates

Presence seminar dates

Date	City	Duration	Price
4 - 8 May 2026	Barcelona - Spain	5 Days	€4,250.-
15 - 19 June 2026	Munich - Germany	5 Days	€3,450.-
20 - 24 July 2026	Barcelona - Spain	5 Days	€3,850.-
3 - 7 August 2026	Amsterdam - Netherlands	5 Days	€4,250.-
7 - 11 September 2026	Rome - Italy	5 Days	€4,250.-
12 - 16 October 2026	Kuala Lumpur - Malaysia	5 Days	€2,250.-
9 - 13 November 2026	Barcelona - Spain	5 Days	€3,850.-
14 - 18 December 2026	London - U.K	5 Days	€4,200.-

— Online seminar dates

Date	Format	Duration	Price
4 - 8 May 2026	Live online	5 Days	€1,850.-
15 - 19 June 2026	Live online	5 Days	€1,850.-
20 - 24 July 2026	Live online	5 Days	€1,850.-
3 - 7 August 2026	Live online	5 Days	€1,850.-
7 - 11 September 2026	Live online	5 Days	€1,850.-
12 - 16 October 2026	Live online	5 Days	€1,850.-
9 - 13 November 2026	Live online	5 Days	€1,850.-
14 - 18 December 2026	Live online	5 Days	€1,850.-