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COURSE BROCHURE

Oil and Gas Project Risk Management Advanced Training Course

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Registered in the United Kingdom and Saudi Arabia

Oil and Gas Project Risk Management Advanced Training Course

Oil and Gas Project Risk Management is a 2-week advanced training course for project managers, project controls specialists and risk engineers on capital oil and gas projects, and each participant completes a capital project risk register and response plan. Overruns on offshore platforms, pipelines and processing plants erode partner confidence, so sanction decisions now rely on credible cost and schedule risk ranges. Jupiter Prime Training runs Oil and Gas Project Risk Management for multi-company project cohorts.

Why Oil and Gas Project Risk Management Matters Now

Capital oil and gas projects face three converging pressures: partners and lenders who scrutinise contingency before final investment decision, supply chains for long-lead equipment such as compressors and subsea trees that remain fragile, and interfaces multiplying as engineering, procurement and construction contractors split scopes across yards and sites. A project that treats risk as a box-ticking register discovers overruns at mechanical completion; one that quantifies uncertainty early protects schedule float and budget. The course draws on the Petroleum Resources Management System PRMS where subsurface uncertainty feeds project scope, and on industry standards published by the American Petroleum Institute API.

Who Gains Most from Oil and Gas Project Risk Management

- Project managers accountable for cost, schedule and sanction readiness of capital developments
- Project controls specialists who build estimates, schedules and earned value reports
- Risk engineers who facilitate workshops and run quantitative risk models
- Interface and package leads coordinating engineering, procurement and construction contractors
- Commissioning and start-up leads who inherit unresolved construction risks

An owner's project team that sends its manager, controls lead and risk engineer together gains most, because they leave using one risk language from register to contingency.

Oil and Gas Project Risk Management Capabilities

Participants move from listing threats to putting probabilities, ranges and owners on them, so that every risk on a platform, pipeline or plant has a cost and schedule consequence.

- Facilitate structured risk identification across project phases — front-end loading and stage-gate reviews
- Build a quantitative schedule risk model with Monte Carlo simulation — sanction and milestone commitments
- Calculate cost contingency at P50 and P90 confidence — investment committees and partners
- Assess interface and contractor risks across packages — contract holders and package managers
- Design risk responses with owners, triggers and costs — project leadership and assurance
- Communicate risk exposure in dashboards and trend reports — steering committees and lenders

Key Oil and Gas Project Risk Management Terms

- Risk register — the controlled list of project threats and opportunities with causes, probability, impact, owner and response actions.
- Monte Carlo simulation — repeated random sampling of uncertain durations and costs to produce probability distributions for completion dates and budgets.
- P50 and P90 — values with a fifty or ninety per cent probability of not being exceeded, used to set targets and contingency.
- Contingency — a budget or time allowance held for identified and unidentified risks within the approved project scope.
- Interface risk — uncertainty arising where scopes, data or physical tie-ins pass between contractors, disciplines or partners.
- Front-end loading — the early project phases where definition, risk and estimate maturity are built before final investment decision.

Oil and Gas Project Risk Management Day by Day

Day 1: The Capital Project Risk Landscape

- Upstream, Midstream and Downstream Project Types — Typical Risk Profiles Compared
- Project Lifecycle and Stage Gates — Where Risk Decisions Are Made
- Owner, Partner and Lender Expectations — Risk Information Needed at Sanction
- Lessons From Overrun Projects — Root Causes in Scope, Supply and Interfaces
- Risk Appetite and Tolerance Statements — Setting Thresholds for Escalation

Day 2: Risk Identification Techniques

- Risk Breakdown Structure for Oil and Gas Projects — Organising Threat Categories
- Facilitated Risk Workshops — Drawing Out Engineering and Construction Uncertainties
- Cause, Event and Effect Statements — Writing Risks That Can Be Managed
- Subsurface and Reservoir Uncertainty Under PRMS — Linking Reserves to Facility Scope
- Opportunity Identification — Capturing Upside in Schedule and Cost

Day 3: Qualitative Assessment and the Register

- Probability and Impact Matrices — Ranking Threats for Management Attention
- Risk Register Design and Fields — Ownership, Status and Response Tracking
- Risk Scoring Calibration — Reducing Bias Between Disciplines and Contractors
- Health, Safety and Environmental Risks in Projects — Integrating Hazard Studies
- Register Maintenance Cycles — Keeping Risks Current Through Execution

Day 4: Schedule Risk Analysis

- Schedule Quality Checks — Logic, Constraints and Float Before Modelling
- Three-Point Duration Estimates — Optimistic, Most Likely and Pessimistic Ranges
- Monte Carlo Schedule Simulation — Completion Date Probability Curves
- Risk Drivers and Tornado Charts — Identifying Activities That Move First Oil
- Merge Bias and Parallel Paths — Why Deterministic Dates Mislead

Day 5: Cost Risk and Contingency

- Estimate Classes and Accuracy Ranges — Matching Maturity to Decision Stage
- Cost Risk Modelling With Correlation — Realistic Spread of Total Cost
- Integrated Cost and Schedule Risk Analysis — Time-Dependent Cost Effects
- Contingency Setting at P50 and P90 — Owner and Partner Budget Commitments
- Contingency Drawdown Rules — Controlling Release During Execution

Day 6: Interface and Contractor Risk

- Interface Management Plans — Mapping Tie-Ins Between Packages and Yards
- Engineering, Procurement and Construction Contract Risk Allocation — Who Carries What
- Contractor Capability and Capacity Assessment — Bid Evaluation Risk Factors
- Long-Lead Equipment and Supply Chain Risk — Compressors, Valves and Subsea Hardware
- Change Order and Claim Exposure — Early Warning Indicators

Day 7: Risk Response Planning

- Avoid, Transfer, Mitigate and Accept Strategies — Choosing by Cost and Effect
- Response Action Plans With Triggers — Owners, Deadlines and Residual Ratings
- Insurance and Contractual Transfer Options — Limits of Risk Shifting
- Opportunity Exploitation Plans — Pulling Forward Schedule Gains
- Secondary and Residual Risk Review — Avoiding New Threats From Responses

Day 8: Risk in Execution, Commissioning and Start-Up

- Construction Phase Risk Reviews — Weather, Productivity and Site Logistics
- Earned Value and Risk Trend Integration — Forecasting at Completion Outcomes
- Mechanical Completion and Handover Risks — Punch Lists and System Readiness
- Commissioning and Start-Up Risk Planning — Protecting First Production
- Simultaneous Operations on Brownfield Sites — Live Plant Tie-In Risks

Day 9: Risk Reporting and Assurance

- Risk Dashboards and Heat Maps — Briefing Steering Committees Clearly
- Independent Project Reviews — Challenging Optimism Before Each Gate
- Risk Culture and Behaviours — Encouraging Early Disclosure of Bad News
- Partner and Lender Risk Reporting — Meeting Joint Venture Information Rights
- Lessons Learned Capture — Feeding Risk Knowledge Into Future Projects

Day 10: Practising the Capital Project Risk Register and Response Plan

- Case Project Risk Identification — Applying Days 2 and 3 to a Development
- Schedule and Cost Simulation Run — Applying Days 4 and 5 to the Case
- Interface and Contractor Risk Review — Applying Day 6 to Package Splits
- Response and Contingency Proposal — Defending Choices to a Mock Sanction Panel
- Capital Project Risk Register and Response Plan — Final Version for Use

Applying Oil and Gas Project Risk Management After the Course

- Run a schedule quality check and three-point estimate exercise on the current project schedule, then produce a first P50 and P90 completion range.
- Facilitate an interface risk session with two contractors on a live tie-in and add the agreed risks, owners and triggers to the register.

Oil and Gas Project Risk Management Questions FAQ

What is oil and gas project risk management and why does it matter now?

It is the discipline of identifying, quantifying and responding to uncertainty in capital oil and gas projects. Partner scrutiny, fragile supply chains and complex contractor interfaces make credible cost and schedule ranges essential before and after sanction.

Which roles gain most from oil and gas project risk management training?

Project managers, project controls specialists, risk engineers, interface leads and commissioning leads gain most. They own the estimates, schedules and contractor relationships where unmanaged uncertainty turns into overruns and delayed first production.

How does oil and gas project risk management differ from a general project management course?

It goes deeper into quantified uncertainty. A general project management course covers planning, scope and stakeholders, while this course concentrates on Monte Carlo schedule and cost models, contingency at P50 and P90, interface risk and response planning for capital oil and gas developments.

What do you bring back from oil and gas project risk management training?

You bring back a risk register and response plan built on a capital project case. It includes ranked risks, simulation results, contingency proposals and response actions that you can adapt to your own project at its next gate review.

Oil and Gas Project Risk Management: The Way Forward

The capital project risk register and response plan gives each participant a working template that links threats to quantified ranges and owned actions. Its first use is the next stage-gate or monthly risk review, where the project manager and sponsor decide contingency levels. After that first cycle, revisit the interface section, because contractor scopes and tie-ins shift as engineering matures.