

Course Overview:

In today's complex operational landscape, engineers are increasingly responsible for identifying and mitigating risks across projects, operations, and strategic initiatives. This course is designed to empower professionals with advanced knowledge of risk management principles and practices aligned with international standards. Participants will gain critical skills to proactively assess, plan for, and respond to risks, enhancing the resilience and success of their organizations.

Course Objective:

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

1. Identify and analyze various types of risks across engineering and operational environments.
2. Apply advanced risk assessment tools and techniques to real-world scenarios.
3. Design and implement robust risk mitigation and control plans.
4. Integrate risk management into project planning, execution, and decision-making.
5. Monitor and communicate risk metrics to stakeholders effectively.

Course Outline:

Module 1: Introduction to Risk Management

- Definitions, concepts, and risk types
- Importance of risk management in engineering
- Overview of ISO 31000 and other frameworks

Module 2: Risk Identification Techniques

- Sources and categories of risk
- Tools: SWOT, PESTLE, brainstorming, checklists
- Risk registers and documentation

Module 3: Risk Assessment and Analysis

- Qualitative vs. quantitative analysis
- Risk matrix and probability-impact charts
- Failure Modes and Effects Analysis (FMEA)

Module 4: Risk Evaluation and Prioritization

- Tolerability and risk appetite
- Prioritizing risks for treatment
- Decision-making under uncertainty

Module 5: Risk Treatment and Mitigation

- Control strategies and implementation
- Cost-benefit analysis of risk responses
- Contingency planning

Module 6: Monitoring and Reviewing Risk

- Setting up monitoring systems
- Key risk indicators (KRIs)
- Continuous improvement loop

Module 7: Integrating Risk into Project Management

- Risk in the project lifecycle
- Risk-adjusted project planning
- Role of the engineer in risk-aware project delivery

Module 8: Legal and Regulatory Aspects

Training Language:

English

Training Methodology:

The course combines various teaching methods, including instructor-led presentations, group discussions, case study analyses, and assessments through quizzes and a final exam to engage participants and ensure they understand and retain the material.

Venue | Date | Fees

Khobar | 22-06-2025 | 17,250 SAR

- Regulatory frameworks affecting engineering
- Contractual risk and liability
- Compliance audits

Module 9: Communication and Reporting

- Risk communication strategies
- Reporting to stakeholders and management
- Visualization and dashboards

Module 10: Final Case Study and Examination

- Group analysis of an engineering risk scenario
- Presentation and discussion
- Final assessment and feedback

Who Should Attend:

This course is tailored for:

- Project Engineers
- Operations Engineers
- Engineering Managers
- Risk and Compliance Officers