Oil and Gas and Process Industry Quantitative Risk Assessment (QRA)

**Purpose**
The purpose of this module is to enable students to understand and apply QRA techniques with particular relevance to the oil & gas and process industries. The module includes an introduction to QRA-related regulatory requirements in the industry. Students will be given an opportunity to conduct QRA exercises for oil & gas / process facilities. The module also covers risk criteria, application of the ALARP principle, sensitivity analysis and cost benefit analysis.

**At the end of the course you will be able to**
1. Critically review the use of QRA in the oil & gas and process industries
2. Interpret legislative/regulatory QRA requirements
3. Apply QRA to simple process industry operations to analyse the risks to personnel/asset/environment
4. Design a QRA report for a simple operation
5. Logically deduce whether risks are ALARP.

**Outline content**
Aims and introduction
Regulatory regimes and use of QRA
Hazard identification
Consequence analysis
Frequency analysis
Reliability of safety systems
Quantitative risk assessment (QRA) for process systems and transportation
Risk criteria
Application of the ALARP principle (further detail in the Risk Reduction and ALARP module)
Sensitivity analysis
Cost benefit analysis

**Recommended prior study**
Education, skills or experience equivalent to undergraduate level
Risktec modules: Introduction to Practical Risk Management; Hazard Identification; Availability, Reliability, Maintainability (ARM) Analysis; Fault Tree & Event Tree Analysis; Physical Effects Modelling

**Who should attend**
Managers, engineers, HSE advisors and risk management practitioners.

**Module is available as**
- Face-to-face (classroom) delivery, or
- Distance learning (web-based) delivery
- Attendance-only (without assessment), or
- Attendance plus assessment by Risktec or University (for CPD credits)
- A constituent of PgCert, PgDip and MSc programmes.

**Assessment details**
Coursework involving around 80 hours of private study
For distance learning only: short in-course tests/exercises plus coursework (80 hrs)

**Module details**
Module Codes: 7535ENGRSK and 7535RSKDL
Level: Masters
Duration: 2 days (F2F) or 8 weeks (DL)
CPD Credits: 10

**Price**
For prices and further information, or to book a course, please contact Vicky Billingham at training@risktec.com

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