

Risk and Safety Management for Engineers

27 hour professional course



Course Introduction

This online course introduces the learner to the major elements of risk and safety management and guides them through the key steps of the risk management process including:

- Risk identification
- Risk analysis
- Risk evaluation
- Risk treatment
- Communication / monitoring

Except where indicated otherwise, the modules are not specific to any one high hazard industry.

The course is designed by practising consultants in high hazard industries, ensuring that your learning is highly relevant to industry.

Course Units – Risk and Safety Management

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| ■ Unit 1 Benefits of Risk Management | ■ Unit 10 QRA | ■ Unit 19 HSE-MS |
| ■ Unit 2 Risk Management Process | ■ Unit 11 QRA Frequency Analysis | ■ Unit 20 Safety Culture |
| ■ Unit 3 Hazard Identification | ■ Unit 12 QRA Consequence Analysis | ■ Unit 21 Incident Investigation |
| ■ Unit 4 HAZID/ENVID Studies | ■ Unit 13 Human Factors | ■ Unit 22 Communication & Consultation |
| ■ Unit 5 HAZOP Study | ■ Unit 14 Functional Safety | ■ Unit 23 Monitoring, Audit and Review |
| ■ Unit 6 Bowtie Analysis part 1 | ■ Unit 15 Acceptance and ALARP | ■ Unit 24 Safety Cases |
| ■ Unit 7 Bowtie Analysis part 2 | ■ Unit 16 Risk Treatment | ■ Unit 25 High Profile Accidents |
| ■ Unit 8 Fault Tree Analysis | ■ Unit 17 Environmental Risk Assessment | ■ Unit 26 Risk Management through Lifecycle |
| ■ Unit 9 Risk Assessment Matrix | ■ Unit 18 Emergency Response Management | ■ Final Assessment |

Expert multidisciplinary e-courses for engineers at all career stages

Learning Outcomes – Risk & Safety Management

At the end of the course, learners will be able to:

- Deconstruct the risk management process into its constituent components.
- Logically deduce the most appropriate risk assessment tool / technique to be used, depending on circumstances.
- Apply risk assessment techniques (e.g. HAZID, ENVID, HAZOP, Bowtie, QRA, Risk Assessment Matrix, HFE, LOPA, SIL, ALARP) for themselves, and better understand assessments carried out by others.
- Appreciate the role of HSE management systems and safety cases, culture, competence, communication, monitoring and review in reducing the probability and consequences of major accidents.
- Define the requirements of emergency and crisis response management and apply an investigation and analysis process to determine the causes of an incident.



About the IET Academy

The IET Academy is an e-learning solution to meet companies' training and development objectives, tailored for engineers at all career levels. It provides in-depth, online courses covering a broad range of technical and professional subjects which can be studied in whole or in bite size units.

The expert content is developed by the Institution of Engineering and Technology (IET), Europe's largest professional engineering institution, in partnership with some of the UK's leading universities and industry organisations – ensuring the highest standard in future engineering e-learning and development.

In-depth learning

Courses range up to 31 hours in full and can be studied in whole or in bite size units allowing companies and individuals to invest in the most suitable training programme for them.

Trusted content

The IET Academy is an industry-leading, online learning solution, providing reliable, high calibre engineering courses in a broad range of technical and professional subjects.

Who should take this course?

This course is suitable for managers, engineers, operators, HSE advisors, risk management practitioners, and anyone else involved in managing risks. Individuals aspiring to hold any of the above types of position will welcome the information and experience contained within the course. Most units are cross-industry, however some include examples from certain sectors.

Pre-requisites: Education, skills or experience equivalent to bachelor degree or equivalent in a relevant science, technology or engineering subject, or 5+ years of relevant work experience, plus proven English language capability.

Cost effective & flexible

For many engineers staying informed of changing technology in order to remain current in their role is paramount, however, finding the time and budget to attend external training is challenging. The IET Academy's flexible learning platform allows access to training 'anytime, anywhere' or the course content can be quickly and easily integrated into your existing learning management system.

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- Management & Leadership
- Power Systems Engineering
- Mobile Communications
- BIM Management
- Connected Autonomous Vehicles

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