

Rail Safety Analysis

Purpose

The course enables students to understand and implement the requirements of formal safety assessment in the rail industry. This involves an introduction to safety and risk with an overview of safety regulations in rail engineering. Potential escalation events, human factors and safety management are discussed. Organisational responsibilities, risk criteria, risk modelling, risk reduction and decision making techniques also form part of the module.

At the end of the course you will be able to

1. Demonstrate knowledge of the principles of risk management and its relevance to the rail industry
2. Apply techniques to evaluate risk of the rail environment from both design and operation aspects
3. Generate a quantitative and/or qualitative rail formal safety assessment

Outline content

Introduction to safety and risk in the rail industry
Identifying and assessing railway hazards and risks:

- Hazard identification techniques
- Historical data
- Risk matrix
- Fault and event trees
- Bowtie analysis

Potential escalation events e.g. speed, derailment
Human factors and safety management
Organisational responsibilities
Risk reduction and criteria
Novel risk modelling and decision making techniques

Recommended prior study

Education, skills or experience equivalent to undergraduate level
Risktec modules: *Principles of Risk Management; Hazard Identification; Fault Tree & Event Tree Analysis*

Who should attend

Managers, engineers, operators, HSE advisors and risk management practitioners.

Delivery Methods

Face-to-face, Distance Learning, or Blended Learning

Levels of Assessment

- Attendance only
- Assessment by Risktec
- Postgraduate Qualifications: PgCert, PgDip and MSc

Assessment details

Postgraduate programmes: activities and assignment (total about 80 hours)

Module details

Level: Masters
Duration: 2 days (F2F), or
8 weeks (Postgraduate DL)

Price

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

Contact

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