

Nuclear Reactor Safety Principles

Purpose

To provide learners with a high level appraisal of nuclear reactor safety principles and associated regulatory issues.

At the end of the course you will be able to

1. Interpret nuclear reactor safety principles enshrined in standards and legislation
2. Consider management of risks from nuclear reactors
3. Assess the nature of reactor hazards and inherent safety
4. Critically review principles of nuclear reactor siting - criteria, hazards, impact and emergency control.

Outline content

National and international standards
Legislative and regulatory framework
Management of nuclear reactor risk

- Risk categorisation
- Defence in depth

Reactor hazards and safety barriers

- Core inventory
- Barriers to release
 - Fuel matrix
 - Cladding
 - Primary coolant system
 - Containment

Nuclear reactor siting – safety considerations

- Siting evaluation criteria
 - Regional characteristics
 - Population characteristics
- Evaluation of external hazards
 - Natural events
 - Human-caused events
- Potential impact of reactor accident
 - Atmospheric
 - Aquatic

Principles of reactor accident management and emergency response

Recommended prior study

Education, skills or experience equivalent to undergraduate level

Who should attend

Managers, engineers, operators, safety advisors and risk management practitioners

Module is available as

- Face-to-face (classroom) delivery
- Attendance-only (without assessment), or
- Attendance plus assessment by Risktec consultants

Assessment details

Activities and/or assignments

Other Details

Duration: 1 day

Price

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

Contact

Risktec Solutions Ltd
Wilderspool Park
Greenall's Avenue
Warrington
WA4 6HL
United Kingdom

Tel +44 1925 611 200

training@risktec.tuv.com
risktec.tuv.com