

Postgraduate Qualifications in Risk and Safety Management

MSc, PgDip and PgCert



TÜVRheinland[®]
Risktec



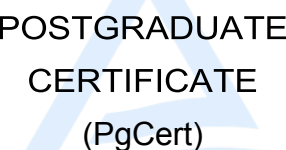
**LIVERPOOL
JOHN MOORES
UNIVERSITY**

Risktec is a leading provider of professional training and education in Risk and Safety Management. We work in partnership with Liverpool John Moores University (LJMU) delivering postgraduate courses.

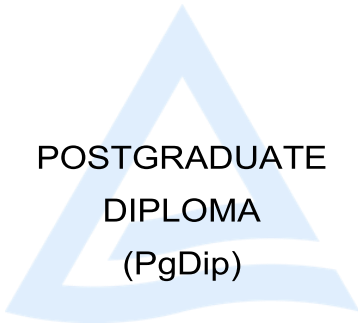
The postgraduate programme has been designed to meet the growing need for industry-related courses and qualifications in risk and safety management. The courses are delivered by teachers with industrial experience and aim to develop the practical skills and knowledge of students.

The modules are kept current through Risktec's processes for monitoring research programmes, new developments, legislation and standards, as well as experiences from across our worldwide consulting activities.


The following postgraduate qualifications in Risk and Safety Management are available:



POSTGRADUATE
CERTIFICATE
(PgCert)



POSTGRADUATE
DIPLOMA
(PgDip)



MASTER OF
SCIENCE
(MSc)

These qualifications will benefit anyone seeking to implement practical risk management within highly regulated industries where the impact of loss is high, whether 'systems' sectors such as nuclear, defence, rail and aviation, or in 'process' industries such as oil and gas, petrochemical and chemical.

Apply now to start your postgraduate programme on

1st February 2018

Email: training@risktec.tuv.com or **visit:** risktec.tuv.com

Programme Information

Why invest in a postgraduate qualification in risk and safety management?

- There is a shortage of skilled risk and safety professionals, so a postgraduate qualification can be a fast track into the profession
- More punitive legislation, use of novel technology and high profile major accidents ensure that risk and safety management is a growing profession
- A postgraduate qualification demonstrates learning with the ability to think creatively in order to solve complex risk and safety problems

Why invest in a postgraduate qualification with Risktec?

- Risktec is respected as a leading safety and risk management consulting and education provider, with global resources and expertise across the industry sectors
- Our programmes are developed and delivered by Risktec's consultants who are practising industry professionals
- Enrolling on a Risktec programme ensures that your learning is relevant to industry and the situations you are likely to encounter in professional practice

At the end of the programme you will be able to:

- Justify the use of risk assessment through illustration of its objectives and drivers
- Analyse and evaluate a broad range of practical risk management tools and techniques and demonstrate expertise in selected techniques
- Devise practical solutions for real-life risk management problems
- Develop a questioning and critical attitude to management of risks
- Display mastery of clear and effective communication of risk
- Demonstrate a commitment to the risk management profession



PROGRAMME AWARDS:

POSTGRADUATE CERTIFICATE

The **PgCert** requires participants to gain 60 credits from 6 modules.

Each module is worth 10 credits and involves up to 100 hours of part-time study, which includes submission of online activities and a formal written assessment. Each module should be completed within 8 weeks.

This programme takes one year to complete.

Upon successful completion of the PgCert, students have the opportunity to upgrade to the PgDip.

POSTGRADUATE DIPLOMA

The **PgDip** requires participants to have gained 120 credits:

- 60 credits from the 6 PgCert modules
- 60 credits from the 6 PgDip modules

The complete programme takes two years and 9 months. There is a 9 month break between the completion of the PgCert modules and the start of the PgDip programme.

Upon successful completion of the PgDip, students have the opportunity to upgrade to the MSc.

MASTER OF SCIENCE

The **MSc** requires participants to gain 180 credits:

- 120 credits from the 12 PgDip modules
- 60 credits from an academic project

This programme takes 3 years and 9 months to complete, with the project scheduled within the last 9 months. There is a 9 month break between the PgCert and PgDip programmes.

IChemE Process Safety Pathway

The IChemE Process Safety Pathway for this MSc is approved by IChemE as meeting the knowledge and understanding requirements for IChemE's Professional Process Safety Engineer qualification.

For students wishing to follow the IChemE Pathway, the PgDip modules must include Physical Effects Modelling and Incident Investigation & Analysis. Other students may choose HAZOP Study and Safety/HSE Cases.

PgCert Modules:

Principles of Risk Management

Drivers for risk management; ALARP & decision making; Risk assessment tools, techniques & studies; HSE/Safety cases & HSE MS; Causes of major accidents; Leadership, culture & behaviours.

Hazard Identification

Hazard identification techniques; Hazard identification through the project lifecycle; Failure modes and effects analysis; HAZOP studies; HAZID/checklist approach; Making recommendations.

HSE Management Systems

Definition of a HSE MS; Elements of a HSE MS; Legislation, standards & guidance; Documenting the HSE MS; Implementing the HSE MS; Leadership & organisational change.

Research Methods

Project analysis and design; Literature search methods; Research methodologies; Coursework methods; Ethics in research; Planning research projects.

Risk Analysis

Identifying and recording hazards; Risk assessment matrix; Risk analysis through the project lifecycle; Qualitative risk analysis techniques; Types of risk assessment; Quantitative risk assessment techniques.

Risk Reduction & ALARP¹

Hierarchy of Risk Reduction Measures; Risk Reduction Through the Lifecycle; ALARP principle; Demonstrating ALARP; Cost Benefit Analysis; Other concepts used in risk reduction.

PgDip Modules:

Culture, Behaviour & Competency

Competency management; Training and resourcing; Organisational culture; Human behaviour; Organisational change management; Examples of major accidents/accident causes.

Human Factors in Design & Operations

Human factors in design; Information processing & operations; Human error identification; Human factors integration.

HAZOP Study

Process safety incidents – lessons learned; HAZOP method; Overview LOPA; Common failings and limitations; Leading HAZOP teams; Other forms of HAZOP – procedures, batch operations.

Safety/HSE Cases¹

Historical drivers, legal & industry requirements; Case by project phase; Safety/HSE Case structure; Bridging documents & supporting studies; Safety/HSE case maintenance; Roll-out and implementation.

Emergency Response & Crisis Management

Emergency anticipation and assessment; Emergency prevention and mitigation; Emergency preparations; Emergency response and recovery; Crisis management overview.

Bowtie Risk Management¹

Bowtie method; Critical elements & tasks; Barrier effectiveness & ALARP; Practical uses of bowties; Facilitating workshops.

OR Physical Effects Modelling²

Source term release and discharge calculation; Dispersion analysis; Fires and explosions; Subsea releases/oil dispersion; Vulnerability of structures and equipment; Software tools.

OR Incident Investigation & Analysis²

Incident investigation theory and process; Immediate actions; Planning the investigation; Data organisation/analysis; Collecting and analysing data; Making recommendations.

¹ Available as a single module. Please enquire for further details.

² Students wishing to follow the IChemE pathway must select Physical Effects Modelling and Incident Investigation & Analysis.

MSc Project:

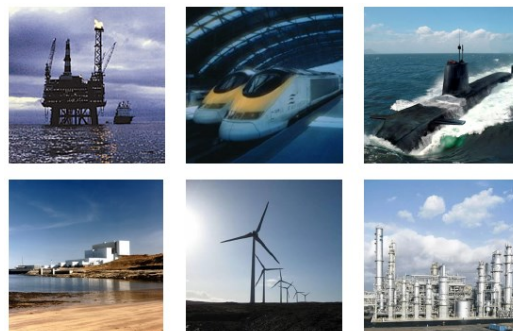
The MSc project comprises a dissertation of approximately 15,000 words. The project is selected in consultation with Risktec and LJMU and requires the student to justify the project's objectives and development plan. Risktec guides the student in selecting a state-of-the-art topic in risk and safety management that is of real interest to current and prospective employers. The student liaises with an academic (LJMU) and industrial (Risktec) supervisor throughout the project.

Completing the MSc enables the student to demonstrate an in-depth knowledge of specific issues related to their dissertation topic, present systematic and relevant written arguments and apply analytical skills in a rigorous and comprehensive manner.

Delivery & Pricing

How is the Programme Delivered?

The programme is delivered by distance learning via our online learning environment, *Risktec Online*. The module material typically comprises 150 slides with explanatory notes, videos, references to further reading and useful websites. During each module students engage in approximately 10 online activities including tests and discussions. This approach encourages participation and interaction amongst students. Support from the module teacher is available throughout the programme. Our distance learning programmes are 100% online, therefore students can study from anywhere in the world.



Dates and Pricing (2018)

Qualification Award	Start Date	Duration	Early Application Price (GBP)	Standard Price (GBP)	Upgrade Price (GBP)
MSc	1 st February 2018	3 years & 8 months*	£15,945	£16,245	From PgDip £4,600
PgDip	1 st February 2018	2 years & 9 months*	£11,610	£11,810	From PgCert £6,110
PgCert	1 st February 2018	12 months	£5,995	£6,110	N/A

* including a 9 month break between the PgCert and PgDip programmes.

Early application price ends 18th December 2017.

Payments will be processed in January 2018. Upgrade prices may vary with future LJMU fee changes and other adjustments for inflation. Customers might be subject to Value Added Tax (VAT) charges. The following guidance is provided as an indication of the VAT likely to be included in your payment instructions:

- VAT will be charged at 20% for a UK-based individual or UK company
- VAT will be charged to a EU-based individual at the rate specific to their country of residence
- No VAT will be charged for an EU-based business (but you must provide proof of trading status, e.g. VAT number, then account for the VAT in your own jurisdiction under EU VAT Business to Business rules)
- No VAT will be charged for an individual or company resident outside the EU

Programme Enrolment

Entry requirements for all applicants

- A relevant bachelor degree or equivalent, or 5+ years of relevant work experience
- Proven English language capability
- Broadband internet access

Enrolment options

Students have the option of either enrolling directly on to the MSc, or enrolling initially on the PgCert and then upgrading to the PgDip and finally the MSc.

How to Register

Email Vicky Billingham at training@risktec.tuv.com for an application form and further information
Apply early to book your place