

# Postgraduate Qualifications in Risk and Safety Management

MSc, PgDip and PgCert



**TÜVRheinland**<sup>®</sup>  
**Risktec**

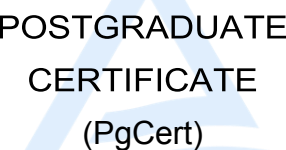


**LIVERPOOL  
JOHN MOORES  
UNIVERSITY**

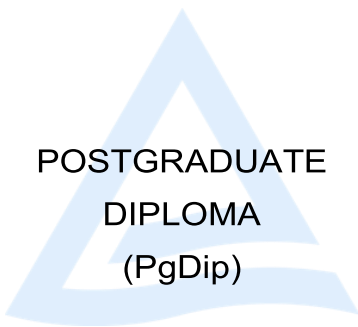
Risktec is a leading provider of professional training and education in Risk and Safety Management. We work in partnership with Liverpool John Moores University (LJMU) delivering postgraduate courses.

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.



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  
**1<sup>st</sup> June 2019**

**Email:** [training@risktec.tuv.com](mailto:training@risktec.tuv.com) or **visit:** [risktec.tuv.com](http://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

## 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



## What our students say:

- “The Risktec course is by far superior in its practicality and content” ( a student, Australia)
- “The course has been a great benefit for me and very enjoyable. So much so that I have proposed it to a number of guys in our section, one of which is about to start the same course.” ( a student, UK)
- “I’d like to compliment Risktec on developing such a great production. I sincerely believe that all safety professionals as well as people who want to increase their knowledge of risk and safety management can benefit by studying either individually or collectively to gain a higher qualification.” ( a student, UK)
- “I’m so happy I found Risktec – it’s exactly what I was after!” (a student, Hong Kong)

## 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, and upon successful completion, 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. 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 to complete, with the project scheduled within the last 9 months.

## 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; safety/HSE 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 & ALARP<sup>1</sup>

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.

### Emergency Response & Crisis Management

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

### Bowtie Risk Management<sup>1</sup>

Bowtie method; critical elements & tasks; barrier effectiveness & ALARP; practical uses of bowties; facilitating workshops; BowTieXP software.

### 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.

### OR Physical Effects Modelling<sup>2</sup>

Source term release and discharge calculation; dispersion analysis; fires and explosions; subsea releases/oil dispersion; vulnerability of structures and equipment; software tools.

### Safety/HSE Cases<sup>1</sup>

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.

### OR Incident Investigation & Analysis<sup>2</sup>

Incident investigation theory and process; immediate actions; planning the investigation; data organisation/analysis; collecting and analysing data; making recommendations.

<sup>1</sup> Available as a single module. Please enquire for further details.

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

## MSc Project:

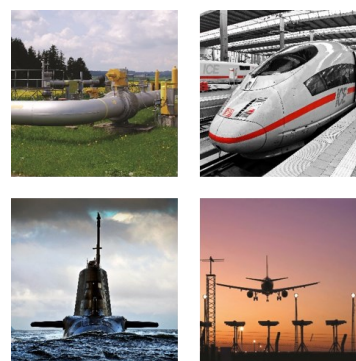
The MSc project comprises a dissertation of approximately 15,000 words. The project is selected in consultation with Risktec and LJMU and requires the student to justify the project's objectives and development plan. Risktec guides the student in selecting a state-of-the-art topic in risk and safety 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.



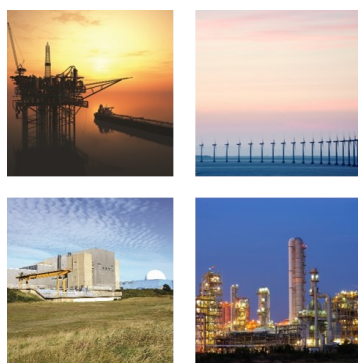
## Dates and Pricing (2019)

Qualification Award	Start Date	Duration	Early Application Price (GBP)	Standard Price (GBP)	Upgrade Price (GBP)
<b>MSc</b>	1 <sup>st</sup> June 2019	3 years	<b>£16,140</b>	<b>£16,440</b>	From PgDip <b>£4,675</b>
<b>PgDip</b>	1 <sup>st</sup> June 2019	2 years	<b>£11,730</b>	<b>£11,930</b>	From PgCert <b>£6,170</b>
<b>PgCert</b>	1 <sup>st</sup> June 2019	12 months	<b>£6,055</b>	<b>£6,170</b>	N/A

Early application price ends 19<sup>th</sup> April 2019.

Payments will be processed in May 2019. Customers might be subject to Value Added Tax (VAT) charges.

Upgrade prices may vary with future LJMU fee changes and other adjustments for inflation.



## 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.

## New for 2019

### Risk and Safety Management Degree Apprenticeship

Risktec's MSc in Risk and Safety Management satisfies the academic requirements for the Risk and Safety Management Degree Apprenticeship. Employers in England can select this MSc with LJMU as the Main Provider.

## How to Register

Email Vicky Billingham at [training@risktec.tuv.com](mailto:training@risktec.tuv.com) for an application form and further information  
Apply early to book your place