# LIVERPOOL JOHN MOORES UNIVERSITY

**Programme Specification Document**

**Approved, 2022.02**

## Overview

| | |
|---|---|
| **Programme Code** | 33169-MS |
| **Programme Title** | Risk and Safety Management |
| **Awarding Institution** | Liverpool John Moores University |
| **Programme Type** | Masters |
| **Language of Programme** | All LJMU programmes are delivered and assessed in English |
| **Programme Leader** | |
| **Link Tutor(s)** | Dante Matellini |

| Partner Name | Partnership Type |
|---|---|
| Risktec Solutions | Validated |

## Awards

| Award Type | Award Description | Award Learning Outcomes |
|---|---|---|
| Target Award | Master of Science - MS | See Learning Outcomes Below |
| Alternative Exit | Postgraduate Certificate - PC | See 33169-PC |
| Alternative Exit | Postgraduate Diploma - PD | Display knowledge and understanding of a large number of risk management tools and techniques Apply appropriate techniques to analyse and solve a large range of risk management problems Evidence critical thinking and analysis of a large number of complex industry-related, risk management issues Understand the key issues relating to environmental and safety matters in order to comply with certain risk management legislation Interpret and analyse many different case study materials pertinent to practical risk management, including evaluation of the safety aspects of a process or system Display enhanced quantitative skills using data analysis, interpolation and extrapolation Demonstrate effective problem solving and decision-making using appropriate quantitative and qualitative skills Demonstrate the skills necessary to plan the findings of a programme of research, using technical literature effectively Apply the skills needed for academic study and enquiry at Level 7 Design technical reports and practise technical report writing for 12 modules Display knowledge and understanding of a range of statutory requirements related to risk management Manage time and prioritise workloads to meet deadlines for 12 modules |

| Alternate Award Names | |
|---|---|
| | |

## External Benchmarks

| Subject Benchmark Statement | |
|---|---|
| | |

## Programme Offering(s)

| Mode of Study, Mode of Delivery | Intake Month | Teaching Institution | Programme Length |
|---|---|---|---|
| Part-Time, Distance Learning | October | Risktec Solutions | 3 Years |

# Aims and Outcomes

## Educational Aims of the Programme

• Justify the use of risk assessment through illustration of the objectives of, and drivers for, risk assessment. • Analyse and evaluate a broad range of practical risk management tools and techniques and apply 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. • Have substantial opportunity to practise self-learning.

## Learning Outcomes

| Code | Description |
|------|-------------|
| PLO1 | Display knowledge and understanding of risk management tools and techniques |
| PLO2 | Apply appropriate techniques to analyse and solve risk management problems |
| PLO3 | Evidence critical thinking and analysis of complex industry-related, risk management issues |
| PLO4 | Interpret and analyse case study material pertinent to practical risk management |
| PLO5 | Analyse and evaluate business and management strategies as they relate to practical risk management |
| PLO6 | Display expertise in a number of key risk analysis methods, including an appreciation of their limitations and range of applicability |
| PLO7 | Demonstrate the skills necessary to plan, conduct and present the findings of a programme of research |
| PLO8 | Apply the skills needed for academic study and enquiry at Level 7 |
| PLO9 | Apply strategies for appropriate selection of information from a wide source and large body of knowledge |
| PLO10 | Critically evaluate information and evidence and apply to industry related scenarios |
| PLO11 | Effective problem solving and decision-making using appropriate quantitative and qualitative skills |
| PLO12 | Evaluate the safety aspects of a process or system |
| PLO13 | Apply learning to workplace situations |
| PLO14 | Understand the key issues relating to environmental and safety matters in order to comply with certain risk management legislation |
| PLO15 | Undertake research and apply appropriate techniques to problem solving |
| PLO16 | Design technical reports and practice technical report writing |
| PLO17 | Use technical/scientific literature effectively |
| PLO18 | Display knowledge and understanding of a range of statutory requirements related to risk management |
| PLO19 | Research and present findings using appropriate information technology |

| Code | Description |
| --- | --- |
| PLO20 | Communicate effectively in a professionally appropriate manner – in writing, verbally and with diagrams |
| PLO21 | Display enhanced self-learning skills appropriate to the level of study |
| PLO22 | Manage time and prioritise workloads to meet deadlines |
| PLO23 | Learn independently in familiar and unfamiliar situations |
| PLO24 | Display enhanced quantitative skills using data analysis, interpolation and extrapolation |
| PLO25 | Evaluate own academic and professional performance and organise/plan self-learning and professional development |

# Programme Structure

## Programme Structure Description

Students are required to achieve 180 credits at Level 7 for an MSc (up to 120 credits by prior learning). PgCert and PgDip alternative exit awards are available to students. There are 3 core modules and 18 optional modules. The Principles of Risk Management module (7588RTC) must be studied first. The Research Methods in Risk and Safety Management module (7593RTC) must be passed before the Project module (7592RTC) is submitted. Nature of Delivery: Modules are studied in series (not in parallel). All teaching materials designed for delivery by distance learning. Duration of Delivery: Each module consists of 16 teaching hours followed by 3-8 weeks of self-study and assessment. The MSc Project (dissertation) module typically requires up to 9 months part-time. The whole MSc programme lasts approximately 36 months part-time.

| Programme Structure - 180 credit points | |
|---|---|
| **Level 7 - 180 credit points** | |
| **Level 7 Core - 80 credit points** | CORE |
| [MODULE] 7588RTC  Principles of Risk Management Approved 2022.01 - 10 credit points | |
| [MODULE] 7592RTC  Project Approved 2022.01 - 60 credit points | |
| [MODULE] 7593RTC  Research Methods in Risk and Safety Management Approved 2022.01 - 10 credit points | |
| **Level 7 Optional - 100 credit points** | OPTIONAL |
| [MODULE] 7577RTC  Availability, Reliability, Maintainability (ARM) Analysis Approved 2022.01 - 10 credit points | |
| [MODULE] 7578RTC  Bowtie Risk Management Approved 2022.01 - 10 credit points | |
| [MODULE] 7579RTC  Culture, Behaviour and Competency Approved 2022.01 - 10 credit points | |
| [MODULE] 7580RTC  Emergency Response and Crisis Management Approved 2022.01 - 10 credit points | |
| [MODULE] 7581RTC  Engineered Risk Control Systems (Oil and Gas) Approved 2022.01 - 10 credit points | |
| [MODULE] 7582RTC  Functional Safety of Safety-Related Systems Approved 2022.01 - 10 credit points | |
| [MODULE] 7583RTC  Hazard and Operability (HAZOP) Study Approved 2022.01 - 10 credit points | |
| [MODULE] 7584RTC  Hazard Identification Approved 2022.01 - 10 credit points | |
| [MODULE] 7585RTC  Health, Safety and Environmental (HSE) Management Systems Approved 2022.01 - 10 credit points | |
| [MODULE] 7586RTC  Human Factors in Design and Operations Approved 2022.01 - 10 credit points | |
| [MODULE] 7587RTC  Incident Investigation and Analysis Approved 2022.01 - 10 credit points | |
| [MODULE] 7589RTC  Oil and Gas and Process Industry Quantitative Risk Assessment (QRA) Approved 2022.01 - 10 credit points | |
| [MODULE] 7590RTC  Oil and Gas and Process Industry Risk Studies Approved 2022.01 - 10 credit points | |
| [MODULE] 7591RTC  Physical Effects Modelling Approved 2022.01 - 10 credit points | |
| [MODULE] 7594RTC  Risk Analysis Approved 2022.01 - 10 credit points | |
| [MODULE] 7595RTC  Risk Reduction and ALARP Approved 2022.01 - 10 credit points | |
| [MODULE] 7596RTC  Safety/HSE Cases Approved 2022.01 - 10 credit points | |
| [MODULE] 7597RTC  Workplace Safety Approved 2022.01 - 10 credit points | |

Module specifications may be accessed at https://proformas.ljmu.ac.uk/Default.aspx

## Teaching, Learning and Assessment

Acquisition of knowledge is achieved mainly through illustrated and annotated presentation materials, individual and group exercises and directed student-centred learning where appropriate resource material is available. Understanding is reinforced through both the exercises and the main end-of-module assessments which typically take the form of an essay (usually case study),technological task and/or technical report. Research for the MSc Project module (the dissertation) will facilitate further learning for the student. Testing of the knowledge base is undertaken in the form of the essays, reports, technological tasks, plus the dissertation Project. Learning outcomes 1-6. Intellectual skills are developed in part through exercises during the module delivery and principally through end-of-module assignments, which test all learning outcomes, learning outcomes 7-12. Individual exercise and group exercises within the taught part of the programme are designed to permit students to demonstrate achievement of learning outcomes 10-12. Analysis and problem solving skills are assessed in the form of essays, reports and technological tasks plus the dissertation Project. Learning outcomes 7-9 are not formally assessed but successful completion of the MSc infers development of the skills. Professional practical skills are developed in a coordinated manner throughout the programme. Real-life examples and case studies are used to illustrate techniques and risk management issues, hence relating the learning to workplace examples. Where a programme is being delivered to a cohort of students from the same employer, company-specific case studies and examples may be used. Professional skills are assessed (informally / implicitly) through essays, reports and technological tasks, plus the dissertation Project. Transferable skills permeate every activity within the programme content and assessment. Skills 19, 20, 21, and 24 are assessed through essays, reports and technological tasks, plus the dissertation Project. Skills 22, 23 and 25 are not formally assessed but their application is embedded within the self-management process of researching and completing assessments and the dissertation project on time.

## Opportunities for work related learning

Assessments will normally be based on an individual's work experience. The modules are designed to be relevant to the workplace and real-life case studies are used throughout, with a practical emphasis on risk management techniques. Students are encouraged to use their own work experience in assignments, where appropriate.

## Entry Requirements

| Type | Description |
| --- | --- |

| | |
|---|---|
| Alternative qualifications considered | Students must meet at least one of the following criteria: • An undergraduate degree or equivalent in science, engineering, business management, or related studies, or • Be an industry professional with 5+ years industry experience, with some exposure to risk management tools and techniques, or • Be a mature student with qualifications and experience who in the opinion of the programme team will be able to successfully complete the programme, or • An appropriate combination of undergraduate degree (or academic equivalent) and industry experience at the discretion of the Programme Leader. The entry criterion for English language ability is possession of one of the following qualifications: • IELTS 6.5, or • TOEFL 560 Paper Based/220 Computer Based/ 83 Internet, or • Cambridge examination Board: Advance Certificate of English, grade C or above. Applicants who have studied and successfully achieved a UK degree, or a degree from an English speaking country, are exempt from the requirements to produce evidence of competence in English. Any applicant to the programme who does not match the above English language criteria will be given an interview (by telephone if face to face is not practical) to ascertain their knowledge, skills and experience in relation to the programme requirements. If a student who has been accepted onto the programme subsequently displays difficulty with the technical content and/or English language, support will be provided. In the first instance the module teacher, Project Manager or Programme Leader will discuss the issue with the student (in confidence) and advice would be given to the student. If the problem persists, the Project Manager and/or Programme Leader will discuss options with the student and, where a student has been placed on the programme by their employer, with the employer (with the student's permission), and the appropriate course of action for the remainder of the programme will be agreed jointly. |

## Extra Entry Requirements