UNIVERSITY OF LEICESTER

Programme Specification (Postgraduate)
For students entering in 2018/19
Date amended: 25 Feb 2017

1. Programme Title(s):

MSc/PGDip/PGCert* Actuarial Science
* Exit award only

2. Awarding body or institution:

University of Leicester

3. a) Mode of study

Part-time

b) Type of study

Distance Learning

4. Registration periods:

PGDip:

The normal period of registration is 24 months
The maximum period of registration is 48 months

MSc:

The normal period of registration is 36 months
The maximum period of registration is 48 months

5. Typical entry requirements:

The entry requirements are at least a 2.1 honours BSc degree or qualification of equivalent standard recognised by the University in Physics, Engineering or Mathematics. In general, it is expected that a student has a solid background in mathematics (calculus, linear algebra, ordinary differential equations, basics of probability and statistics). Because applications are treated on an individual basis, alternative qualifications, including work experience, may be considered.

Students whose first language is not English will need to satisfy the University's English language requirements, equivalent to IELTS 6.0.

6. Accreditation of Prior Learning:

Students may be eligible to transfer into the course with up to 60 credits of prior exemptions. These will be exemptions from the Institute of Actuaries CT1-8 examinations completed in the last 5 years, students must present official letters from the profession confirming their successful completion of the subject at the point of application. Any accreditation awarded will then reduce the student's module liability as part of the PGDip/MSc course.

7. Programme aims:

The overall aim of the programme is to provide foundation knowledge in all areas of actuarial science, based on the curriculum for the first stage of the Faculty and Institute of Actuaries (FIA) qualification process (the "core technical" (CT) examinations).
The programme also aims to

- develop links with the Profession and actuarial employers to benefit students across the University and research programmes;
- develop students' interest in actuarial mathematics and its applications in preparation for

further study and career;
- foster students' independent learning, organisation skills and employability skills.

8. Reference points used to inform the programme specification:

- External accreditation (e.g. reports from professional body FIA)
- QAA Framework for Higher Education Qualifications in England, Wales and Northern Ireland
- QAA Master's Degree Characteristics
- QAA Benchmarking Statement Mathematics, Statistics and Operational Research (MMath)
- QAA Annex to subject benchmark statement: Mathematics, statistics and operational research (2009)
- PDR report (April 2011)
- University Learning Strategy
- University Employability Strategy
- Graduate Survey (2014)
- First Destination Survey
- External Examiner's Reports

9. Programme Outcomes:

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(a) Subject and Professional skills		
Knowledge		
Demonstrate knowledge of the principles of actuarial science. Demonstrate mastery of mathematical conventions used within the industry.	Learning material, electronic tutorials, and electronic forums. As above.	Examinations, project presentations and reports, regular assessment, and contributions to electronic forums. As above.
Concepts		
Demonstrate knowledge, understanding and application of appropriate mathematical, statistical and financial techniques. Demonstrate knowledge of actuarial products including valuation and assessment of financial risks associated with each.	Learning material, electronic tutorials, and electronic forums. As above.	Examinations, project presentations and reports, regular assessment, and contributions to electronic forums. As above.
Techniques		
Apply mathematical, statistical and financial methods to analyse, evaluate and model actuarial problems	Lectures, learning material, short projects, extended case study.	Examinations, project presentations and reports, regular assessment, and contributions to forums.
Critical analysis		
Apply actuarial principles to model and analyse financial scenarios. Evaluate and discuss financial risks and possible impact on financial projects.	Learning material, electronic tutorials, and electronic forums. As above.	Examinations, project presentations and reports, regular assessment, and contributions to electronic forums. As above.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Presentation		
Interpret and report results, present data in alternative forms for a range of audiences.	Learning material, electronic tutorials, and electronic forums.	Project presentations, tutorials and electronic forums.
Appraisal of evidence		
Select and apply appropriate mathematical methods for modelling and analysing financial problems. Take into account commercial constraints when valuing and developing financial products.	Learning material, electronic tutorials, and electronic forums. As above.	Examinations, project presentations and reports, regular assessment, and contributions to electronic forums. As above.
(b) Transferable skills		
Research skills		
Demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional level	Projects and independent research.	Project presentations and reports
Communication skills		
Present technical and financial information orally, in an appropriate form for a given audience. Communicate technical and financial information in an appropriate written form for a given audience.	Tutorials, projects and independent research.	Oral presentations Written work.
Data presentation		
Manipulate and derive mathematical expressions for financial projects. Estimate realistic values for common financial quantities. Manipulate and sort numerical data.	Learning material, electronic tutorials, and electronic forums. As above. As above.	Examinations, project presentations and reports, regular assessment, and contributions to electronic forums. As above. As above.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Information technology		
Use statistical and numerical software where appropriate. Demonstrate a broad understanding of common IT tools.	Projects and independent research. As above.	Written reports, submission of regular assignments. Written assignments, electronic forums and submission of regular assessment.
Problem solving		
Solve problems relevant to the financial industry through the use of mathematics, economics and other financial techniques. Use creativity and innovation to solve problems.	Learning material, electronic tutorials, and electronic forums. As above.	Examinations, project presentations and reports, regular assessment, and contributions to electronic forums. As above.
Working relationships		
Work collaboratively as part of a team.	Group discussion forums	Tutorial presentations.
Managing learning		
Identifying a credible Research project, drawing up a realistic research time-table, reflecting on and 'writing up' results	Coursework in modules.	Oral presentations, completion of coursework, project plan, and project.
Career management		
Demonstrate knowledge and understanding of professional and ethical responsibilities of an actuary. Develop and implement personal plan of work to meet a deadline. Learn independently and understand new concepts in the discipline readily. Use of IT in the process of learning.	Learning material, electronic tutorials, and electronic forums. As above. Use of DL learning material/techniques. As above.	Examinations, project presentations and reports, and regular assessment. As above. As above. As above.

10. Special features:

Supported distance learning using Blackboard, wiki study materials and online tutorial functions. Compulsory formative coursework to demonstrate student learning and engagement with the material is required throughout each taught module, followed by assessment by examination held in a local exam venue to the student's home address.

11. Indications of programme quality:

External examiner's report; FIA accreditation and annual reviews.

12. Scheme of Assessment
This programme follows the Senate Regulation 6 for Postgraduate Taught programmes.
This programme follows the 120 taught credits and a 60 credit research project structure.

13. Progression points
At the end of taught modules student progression will be reviewed. Students satisfactorily completing all taught modules to date at first attempt will be eligible to proceed to research project or further study. Those students who have not successfully passed all taught modules will be required to re-sit failed modules in line with the Senate Regulation 6 .

In addition students' progression will be reviewed at the end of the first year of study or 60 credits whichever is the sooner, to confirm progression to the following year of study. Students who have not successfully passed all of the taught modules may not be permitted to continue with their studies until they have successfully passed any failed module.

In cases where a student has failed to meet a requirement to progress he or she will be required to withdraw from the course and a recommendation will be made to the Board of Examiners for an intermediate award where appropriate.

14. Rules relating to re-sits or re-submissions:
This programme follows the Senate Regulation 6 for Postgraduate Taught programmes. Students will be allowed one re-sit of the examination component of each module; the mark obtained for re-sit will be capped at 50%.

15. Additional information [e.g. timetable for admissions]
There will be two intakes a year in May and October and applications are accepted throughout the year.

16. External examiners
The details of the External Examiner(s) for this programme and the most recent External Examiners' reports can be found here

Appendix 1: **Programme structure** (programme regulations)

MSc/PGDip in Actuarial Science

May intake

YEAR ONE

Core Modules:			**Credits**
MA7513	Statistics		15
MA7517	Business Economics		15
MA7511	Financial Mathematics		15
MA7514	Models and Mortality		15
		Year Total	**60**

YEAR TWO

Core Modules:			**Credits**
MA7515	Contingencies		15
MA7516	Statistical Methods		15
MA7512	Finance and Financial Reporting		15
MA7518	Financial Economics		15
		Year Total	**60**

YEAR THREE

Core Module			**Credits**
MA7506	Individual Project		60
		Total Credits	**180**

MSc/PGDip in Actuarial Science

October intake

YEAR ONE

Core Modules:			**Credits**
MA7513	Statistics		15
MA7512	Finance and Financial Reporting		15
MA7511	Financial Mathematics		15
MA7514	Models and Mortality		15
		Year Total	**60**

YEAR TWO

Core Modules:			**Credits**
MA7515	Contingencies		15
MA7516	Statistical Methods		15
MA7517	Business Economics		15
MA7518	Financial Economics		15
		Year Total	**60**

YEAR THREE

Core Module			**Credits**
MA7506	Individual Project		60
		Total Credits	**180**

Appendix 2: Module Specifications

See module specification database http://www.le.ac.uk/sas/courses/documentation