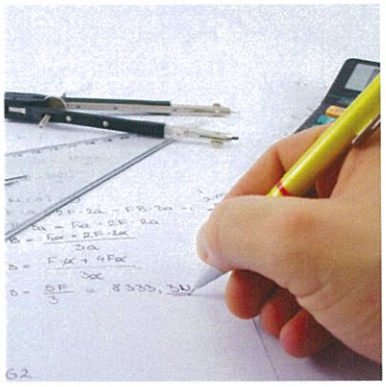
College of Science,
Engineering & Food Science

UCC

University College Cork, Ireland
Coláiste na hOllscoile Corcaigh



# MSc ACTUARIAL SCIENCE

The MSc in Actuarial Science at UCC is designed to give candidates from quantitative and numerate backgrounds a chance to kick-start their careers in Actuarial Science. This course provides a solid foundation in the core principals and techniques of Actuarial Science and includes taught modules in the areas of statistics, financial mathematics, market analysis and business finance.

Fundamentally the course will equip its graduates with the relevant mathematical and statistical knowledge-base and problem-solving skills to help businesses and institutions better assess and manage their risk profiles and make sound business decisions. Graduates would have the chance of employment throughout the financial services sector such as in insurance, pensions, healthcare, banking, investment and risk strategy and assessment.

This course also gives candidates the opportunity to undertake a minor dissertation and obtain a Level 9 qualification in Actuarial Science through the study and examination of a number of problems specific to the insurance and financial sector.

**Progression/Exit Pathways:**
Graduates of the MSc programme would be capable of continuing their study of the syllabi of the Institute and Faculty of Actuaries leading ultimately to a professional actuarial qualification from that body. A student of the programme may opt to take an exit award of a Postgraduate Diploma in Actuarial Science upon passing the 60-credits of modules as listed in the University Calendar Entry for this programme.

**Entry requirements:**
Candidates must have (i) obtained at least a second class honours primary degree in engineering, finance, physical or mathematical sciences, or equivalent, or in a degree with a strong numerate content (as determined by the programme committee) and (ii) to the satisfaction of the programme committee have demonstrated by their performance in relevant modules that they possess the numeracy skills required for this MSc degree programme. Graduates with a BSc in Financial Mathematics and Actuarial Science (FMAS graduates) or equivalent are not eligible to apply for this programme. All candidates must ultimately be approved by the programme co-ordinator. In the case of competition for places selection will be made on the basis of the candidate's primary degree results and interview performance (if required). Candidates, for whom English is not their primary language, should possess an IELTS of 6.5 (or TOEFL equivalent) in each individual category.

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**What will I be Studying?**
**Part 1:**
**Students take the following 50 credits of Core modules:**

- ST6001 Theory of Annuities - Certain for Actuarial Science (10 credits)
- ST6002 Applied Financial Reporting Methods for Actuarial Science (10 credits)
- ST6003 Probability & Mathematical Statistics for Actuarial Science (10 credits)
- ST6004 Mortality Studies and Life Table Analysis for Actuarial Science (10 credits)
- PA6007 Market Analysis Methods for Actuarial Science (10 credits)

**Students take 10 credits from the following electives:**

- ST6006 Insurance Risk Modelling for Actuarial Science (10 credits)
  or
- ST6010 Current Topics in Statistical Applications to Actuarial Science (10 credits).

**Part 2:**
**Students take the following 20 credit Core module:**

- ST6009 Application of Core Technical Research Methodologies in Actuarial Science (20 credits).

**Students take 10 credits from the following electives:**

- ST6005 Life Contingencies for Actuarial Science (10 credits)
  or
  ST6008 Applied Financial Modelling and Risk Stochastics for Actuarial Science (10 credits)

A complete description of assessment on each individual module can be viewed at: http://www.ucc.ie/modules

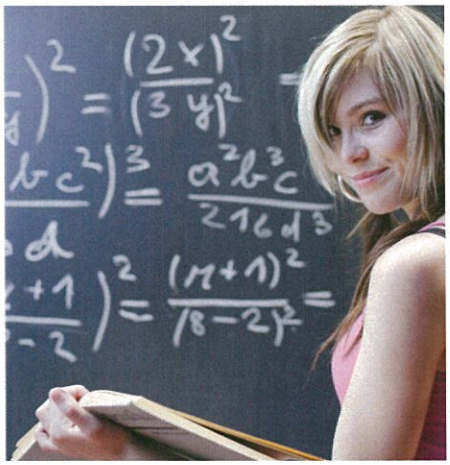
**Duration:** 1-year full-time or 2-years part time

**Information on Exemptions from Professional Actuarial Examinations:**
The MSc in Actuarial Science programme has been fully accredited by the Institute and Faculty of Actuaries in respect of the first 8 Core Technical subjects. Students may be recommended for exemptions from the Institute's own professional examinations in up to 7 of these Core Technical subjects by performing sufficiently well in the examination and thesis element of the MSc Programme. UCC is one of the very few Universities in Ireland which can offer students the potential to receive this level of exemptions from the professional actuarial examinations. Further details on the content and modules are available on the Postgraduate College Calendar.

**Career and Research Prospects/Employment statistics/Salary information:**
Wherever there is risk and uncertainty then there will be very strong demand for graduates of Actuarial Science programmes. Indeed the current financial crisis has polarised the need for risk specialists to prudently manage the risk profile of financial and corporate institutions.

Graduates of Actuarial Science programmes continue to find employment in traditional areas such as insurance, pensions, reinsurance, underwriting, banking and financial consultancy. However new and non-traditional sectors of employment have opened up for actuaries in recent years. In particular actuaries are now bringing their skills to bear in fields such as investments, healthcare, risk management, financial planning, regulation and hedge funds.

An actuarial qualification is very highly regarded throughout the world. The Actuarial Profession is a very ethical profession whose members practice to the very highest standard. A recent survey by the US careers website CareerCast ranked 'Actuary' as the best profession in 2013.



**For further information particularly in relation to potential accreditation aspects please contact:**

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http://www.ucc.ie/en/euclid/edu_and_careers/postgraduateprogrammes/mscactuarialscience/

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