

The Objective of this four year, full-time degree is to produce graduates with the ability to apply mathematical methods to the problems of the financial and insurance sectors. The application of such techniques has revolutionised many areas of these industries over the last fifteen years.

Students who attain high standards in any of a range of specified modules offered on this programme may be recommended for exemption from all of the first series of examinations of the Faculty of Actuaries and the Institute of Actuaries (Core Technical Examinations). The degree is fully accredited by the Institute and Faculty of Actuaries.

Programme Summary

The course is of four years' duration and falls naturally into two halves. In the first four semesters (i.e. Years 1 and 2), the aim of the programme is to provide the student with a broad introduction to the main branches of modern mathematics and its applications, enabling students to make informed choices regarding their choice of specialist topics in the latter half of the course. In the second half (Years 3 and 4), the course concentrates on those areas of mathematics that may be applied to problems in finance, insurance and banking, and in particular in the methods of actuarial mathematics.

Relevant Work Experience

Students in the degree have the opportunity of gaining experience as an employee in a commercial environment through DCU's work experience programme INTRA (Integrated TRaining). INTRA is a central feature of education at DCU and an integral part of most undergraduate and some postgraduate degree programmes. Students who are particularly interested in pursuing an actuarial career often take their work placement with a major insurance company. Many students who wish to follow a career in finance or banking are placed with commercial or investment banks.

Students from the BSc Actuarial Mathematics are required to complete an eight-month INTRA placement at the end of third academic year, from February to September inclusive.

Work Areas

- Life Assurance
- Insurance
- Investment and Commercial Banking
- Financial Analysis and Trading
- Business and Actuarial Consultancy
- Statistical Analysis
- Software Development

Student Availability

Students are available for interview from October onwards. Please post vacancies on the *INTRA* online website at www.intra.dcu.ie, or send details to:

INTRA Unit, Student Support & Development,
Dublin City University,
Glasnevin, Dublin 9, Ireland.
Phone: 00 353 1 700 5514
Fax: 00 353 1 700 5505
Website: www.intra.dcu.ie



B.Sc. Actuarial Mathematics

Year 1		Year 2		Year 3		Year 4	
Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2
Computing for Mathematics	Computing for Mathematics	Statistics I	Statistics II	Principles of Accounting and Stochastic Modelling	I N T R A	Core	Core
Calculus	Analysis I	Calculus of Several Variables	Complex Analysis	Financial Mathematics		Financial Economics I	Financial Economics II
Introduction to Economics	Introduction to Economics	Analysis II	Differential Equations	Actuarial Modelling		Time Series	Life Contingencies
Linear Mathematics	Linear Mathematics	Numerical Methods	Mathematics of Finance: An Introduction	Option: Treasury Mathematics		Risk Theory	Optional Optimisation Financial Engineering Fixed Income Markets and Instruments Monte Carlo Methods in Finance Coding & Cryptograph
The Mathematical Experience	Probability I	Linear Algebra	Probability II			Simulation for Finance	
			Accounting I				