MA in Statistics
UCD School of Mathematical Sciences

Why is this course for me?

This programme is intended for students with a numerate background but who may have insufficient background knowledge to gain entry to the MSc programme. The MA in statistics is of 16 months durations (4 semesters) and will bring students to the same level as the 1 year MSc degree in Statistics.

Currently students without sufficient statistical background knowledge can attain Masters level proficiency by first completing the Higher Diploma in Statistics followed by the MSc in Statistics, which together takes 2 years. The MA in Statistics provides an alternative pathway in 16 months. There is no comparable programme in Ireland or the UK. The M.A. in Statistics consists of a mixture of compulsory and optional modules and a major project. Compulsory modules are intended to ensure all students have appropriate basic statistical skills, knowledge and experience, while optional modules provide depth and exposure to the diverse range of statistical applications and methods. This latter aspect provides students with the opportunity to specialize in specific areas. The major project provides the students the chance to work extensively on either a theoretical or practical problem. An M.A. in Statistics should open a host of interesting and rewarding career opportunities and give skills that are much in demand. For example, former M.Sc. in Statistics students have found employment in industry, government, IT, economics and finance. Demand for graduates continues to be strong both in Ireland and abroad. The M.A. is also intended to be a good stepping stone for doctoral studies.

Why study at University College Dublin?

Some of the reasons to study at UCD:

- In the top 1% of the world's universities
- Ireland's largest provider of graduate education
- A diverse university, both in academic disciplines and culture
- Emphasis on research and innovation
- Purpose-built, modern parkland campus, close to Dublin city centre
- Extensive range of campus accommodation options.

UCD College of Science

The College is dedicated to the creation, delivery and communication of new knowledge and innovation across the spectrum of Science. With a staff of 750 and a student population of 5,500, including 1,800 postgraduate students, the College is a vibrant community dedicated to excellence in all our pursuits.

UCD School of Mathematical Sciences

The school is the largest of its kind in Ireland. It is a dynamic, multi-disciplinary department spanning the three disciplines of Mathematics, Applied and Computational Mathematics and Statistics and Actuarial Science. The school engages in research of international renown and teaches students in almost all of the colleges of the university. As well as having a strong commitment to basic research, several members in the school are involved in the UCD Complex Adaptive Systems Laboratory (CASL) and the Claude Shannon Institute for Coding, Cryptography and Discrete Mathematics.

What will I study?

You will study from a range of exciting topics taught by experts in these fields of study. There are 120 credits of work to do spread over four semesters. The first two semesters involve taking nine 5-credit modules (45 credits) from the Higher Diploma in Statistics programme and two modules at 7.5 credit (15 credits) from the M.Sc. in Statistics programme. The third semester involves a 30 credit dissertation or data analytic project. The fourth semester involves taking four modules at 7.5 credits (30 credits) at level 4 from the M.Sc. in Statistics programme.

Modules offered change from year to year and the list includes:

- Linear Models
- Data Mining
- Time Series
- Multivariate Analysis
- Experimental Design
- Mathematical Statistics
- Monte Carlo inference
- Actuarial Statistics
- Survival Analysis
- Stochastic models
- Bayesian analysis

Research - Dissertation

In addition to the course work, students undertake a research project (30 credits) supervised by a member of staff. The dissertation is a fairly substantial piece of work completed in the summer semester.

Programme outcomes

On successful completion of the programme students will:

- be able to demonstrate in-depth understanding of statistical concepts, apply basic statistical reasoning, techniques and models in the analysis of real data and employ technical computing skills;
- have learned from experiences gained in different contexts and how apply knowledge across discipline boundaries to solve problems;
- developed excellent presentation skills;
- appreciate the importance of professional development and the resources available to keep up to date with new developments in the field;
- have acquired a much sought after qualification that can be applied to a wide variety of careers.

What are the career opportunities?

Career prospects on completion of the M.Sc. in Statistics are excellent and the M.A. in Statistics provides an equivalent qualification. Many students pursue careers in the pharmaceutical industry (e.g. Elan, Quintiles). Students also enter careers in banking , finance and risk management. There is increased demand for statisticians from the IT sector (e.g. Google, Intel, data mining companies). In addition many government departments employ statisticians including the Central Statistics Office. Some past students embarked on a career in academia by proceeding to study for a Ph.D. in Statistics

Staff Profile and Testimonial

Staff

Dr Andrew Parnell

School of Mathematical Sciences, Complex and Adaptive Systems Laboratory

I obtained my first degree from the University of Kent at Canterbury in 1999 with a degree in Mathematics and Management Science, followed by a Masters degree in Statistics at the same institution. I worked in marketing in London for 2 years before obtaining a PhD at the University of Sheffield in 2005. Between 2005 and 2008 I was a research fellow at Trinity College Dublin. I was appointed Lecturer in Statistics in the School of Mathematical Sciences in UCD, gaining tenure in 2011. My main statistical interest is in Bayesian stochastic processes and computational statistics. I am particularly interested in Gaussian processes, stochastic volatility models, compositional data analysis and monotonic processes. I have applied such models to a variety of environmental, biomedical and ecological science problems relating to: spatio-temporal climate reconstruction, stable isotope mixing models, the development of biomarker panels for prostate cancer, sea-level change and radiocarbon dating.

How do I apply?

Entry Qualifications

Our standard admissions requirement is at least a 2.1 honours degree in mathematics, economics, finance, certain engineering degrees or similar quantitative disciplines where statistics has formed some component of the degree. However in exceptional circumstances we will consider applications from students who do not satisfy these requirements but can demonstrate an interest and ability in statistics.

Alternatively students may qualify for enrolment to the Higher Diploma Statistics from which they can gain entry to the 1-year M.Sc. in Statistics.

Contact

Any queries about the courses should be directed to the Graduate Administrator pgstudies@maths.ucd.ie ; Tel. +353-1-716 7152).

Applying Online

To apply online, please go to: http://www.ucd.ie/apply

Fee Information

For information on fees, please visit: www.ucd.ie/registry/adminservices/fees

Useful Links

For more information please visit the website:
http://www.ucd.ie/graduatestudies/coursefinder/taughtprogrammes/