MATHEMATICS AND STATISTICAL SCIENCE MSc
UCAS CODE: GGC3
2020 ENTRY

www.ucl.ac.uk/prospectus
This MSci, accredited by the Royal Statistical Society, offers an additional year of study on top of the Mathematics and Statistical Science BSc. Students have the opportunity to specialise further by taking more advanced modules and completing a major project. No previous knowledge of statistics is required.

### Key information

**Programme starts**

September 2020

**Location**

London, Bloomsbury

### Degree benefits

- The programme is an excellent preparation for becoming a professional statistician or an actuary.
- The programme is accredited by the Royal Statistical Society. On application to the society, graduates are awarded Graduate Statistician status provided that at least second-class Honours has been obtained.
- Highly regarded UCL Mathematics is home to world-leading researchers in a wide range of fields, especially geometry, spectral theory, number theory, fluid dynamics and mathematical modelling.
- Three of the six British winners of the Fields medal (the mathematician's equivalent of the Nobel Prize) have associations with the department.

### Accreditation

This programme is accredited by the Royal Statistical Society. On application to the Royal Statistical Society, graduates are awarded Graduate Statistician (GradStat) status, providing formal recognition of a member's statistical qualifications.

### Degree structure

In each year of your degree you will take a number of individual modules, normally valued at 15 or 30 credits, adding up to a total of 120 credits for the year. Modules are assessed in the academic year in which they are taken. The balance of compulsory and optional modules varies from programme to programme and year to year. A 30-credit module is considered equivalent to 15 credits in the European Credit Transfer System (ECTS).

In the first and second years of the programme you will take a balanced selection of modules in both UCL Mathematics and UCL Statistical Science. You will take a selection of designated modules in the third year and undertake a major project in your fourth year, which will include a substantial piece of written work and a presentation.

Statistics will include much practical work while the mathematics will cover the theoretical aspects of the pure mathematics required to sustain and understand this.

This programme is offered as a three-year BSc or a four-year MSci degree. The first two years of the programme are identical, and students are advised to apply for the MSci degree in the first instance, as it is possible to transfer to the BSc during the first three years.

#### YEAR ONE

**Core or compulsory module(s)**

- **Mathematics modules:**
  - Algebra 1
  - Analysis 1
  - Analysis 2
  - Mathematical Methods 1
  - Mathematical Methods 2
- **Statistical science modules:**
  - Introduction to Practical Statistics
  - Introduction to Probability and Statistics

#### YEAR TWO

**Core or compulsory module(s)**

- **Mathematics modules:**
  - Algebra 2
  - Analysis 3: Complex Analysis
  - Analysis 4: Real Analysis
- **Statistical science modules:**
  - Computing for Practical Statistics
  - Introduction to Applied Probability
  - Linear Models and the Analysis of Variance
  - Further Probability and Statistics

**Optional modules**

- You will select one of the following statistical science modules:
  - Optimization Algorithms in Operations Research
  - Social Statistics

#### YEAR THREE

**Core or compulsory module(s)**

- **Mathematics modules:**
  - Algebra 3: Further Linear Algebra
  - Measure Theory
  - Statistical science module:
    - Statistical Inference

**Optional modules**

- You will select:
  - 0.5 credits of designated mathematics options
  - 1.0 credits of statistics options
  - 1.0 credits from designated mathematics or standard statistical science options
  - Up to 0.5 credits may be replaced by an outside option, subject to department approval.
FINAL YEAR

Core or compulsory module(s)

All final year modules are optional. Currently available mathematics options are described on the UCL Mathematics website.

Optional modules

- You will select:
  - 1.0 credit of fourth-year mathematics options
  - 1.0 credit of suitable statistical science options
  - 1.0 credit from third- or fourth-year mathematics or suitable statistical science options
- Plus either:
  - Statistics Project (1.0 credit)
  - Project in Mathematics (1.0 credit)
- Up to 0.5 credits may be replaced by an outside option, subject to department approval.

Your learning

Teaching is mainly carried out through lectures and small-group tutorials. Problem classes allow you to exercise the skills you have learned. In addition, an 'office hours' system for each programme allows you to meet with tutors on a one-to-one basis to review parts of the degree that you find interesting or need clarifying. A Student Mentor scheme runs in the department offering support and advice to first-years.

Assessment

Most modules are assessed by two-hour written examinations in the third term, with a small element (10%) of coursework assessment.

Your career

We aim to develop your skills in mathematical reasoning, problem-solving and accurate mathematical manipulation. You will also learn to handle abstract concepts and to think critically, argue logically and express yourself clearly.

A mathematics degree is highly valued by employers due to the skills in logical thinking, analysis, problem-solving and, of course, numeracy, that it develops.

Your application

Application for admission should be made through UCAS (the Universities and Colleges Admissions Service). Applicants currently at school or college will be provided with advice on the process; however, applicants who have left school or who are based outside the United Kingdom may obtain information directly from UCAS.

In addition to academic requirements, we expect you to demonstrate an understanding and enjoyment of the subject beyond the examined syllabus, through your reading and involvement in problem-solving activities. Evidence of your curiosity and perseverance in tackling puzzles, and your enjoyment of logical and abstract thinking, should be shown in your application.
Entry requirements

A LEVELS


GCSE

English Language and Mathematics at grade C or 5. For UK-based students, a grade C or 5 or equivalent in a foreign language (other than Ancient Greek, Biblical Hebrew or Latin) is required. UCL provides opportunities to meet the foreign language requirement following enrolment, further details at: www.ucl.ac.uk/ug-reqs

IB DIPLOMA

Standard Offer: 39 points. A score of 20 points in three higher level subjects including 7 in Mathematics, or 19 points in three higher level subjects including 7 in Mathematics and a 2 in any STEP paper or a distinction in Mathematics AEA, with no score below 5.

Contextual Offer: 39 points. A score of 19 points in three higher level subjects including 7 in Mathematics

CONTEXTUAL OFFERS – ACCESS UCL SCHEME

As part of our commitment to increasing participation from underrepresented groups, students may be eligible for a contextual offer as part of the Access UCL scheme. For more information see www.ucl.ac.uk/prospectus

OTHER QUALIFICATIONS

UCL considers a wide range of UK and international qualifications for entry into its undergraduate programmes. Full details are given at: www.ucl.ac.uk/otherquals

UNDERGRADUATE PREPARATORY CERTIFICATES

(Unternational foundation courses)

UCL Undergraduate Preparatory Certificates (UPCs) are intensive one-year foundation courses for international students of high academic potential who are aiming to gain access to undergraduate degree programmes at UCL and other top UK universities.

Typical UPC students will be high achievers in a 12-year school system which does not meet the standard required for direct entry to UCL.

For more information see: www.ucl.ac.uk/upc.

Tuition Fees

The fees indicated are for undergraduate entry in the 2020/21 academic year. The UK/EU fees shown are for the first year of the programme at UCL only. Fees for future years may be subject to an inflationary increase. The Overseas fees shown are the fees that will be charged to 2020/21 entrants for each year of study on the programme, unless otherwise indicated below.

// UK & EU: £9,250 (2020/21)
// Overseas: £25,110 (2020/21)

Full details of UCL’s tuition fees, tuition fee policy and potential increases to fees can be found on the UCL Students website.

Funding

Various funding options are available, including student loans, scholarships and bursaries. UK students whose household income falls below a certain level may also be eligible for a non-repayable bursary or for certain scholarships. Please see the Fees and funding pages for more details.

Contact

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Department: Mathematics

Brexit

For up-to-date information relating to specific key questions following the UK’s decision to leave the EU, please refer to: www.ucl.ac.uk/brexit

Disclaimer

This information is for guidance only. It should not be construed as advice nor relied upon and does not form part of any contract. For more information on UCL’s degree programmes please see the UCL Undergraduate Prospectus at www.ucl.ac.uk/prospectus