GENETICS OF HUMAN DISEASE MSc / 2018/19 ENTRY

www.ucl.ac.uk/graduate/biosciences
The Genetics of Human Disease MSc aims to provide students with an in-depth knowledge of molecular genetics, quantitative and statistical genetics and human disease and how this can be applied to improve healthcare through the development and application of diagnostic tests and therapeutic agents.

**Degree summary**

The programme provides a thorough grounding in modern approaches to the understanding of the genetics of disease alongside the cutting-edge research methods and techniques used to advance our understanding of development of disease. Core modules provide a broad coverage of the genetics of disease, research skills and social aspects, whilst specialised streams in Inherited Diseases, Pharmacogenetics and Computational Genomics, in which students can qualify, and the research project allow more in-depth analysis in areas of genetics.

- UCL is in a unique position to offer both the basic science and application of modern genetics to improve human health. The programme is a cross-faculty initiative with teaching from across the School of Life and Medical Sciences (SLMS) at UCL.
- Students will be based at the UCL Genetics Institute (UGI), a world-leading centre which develops and applies biostatistical and bioinformatic approaches to human and population genetics. Opportunities to conduct laboratory or computational-based research projects are available in the laboratories of world-leading geneticists affiliated to the UGI.

Students develop their knowledge and understanding of genetics of human diseases through a combination of lectures, seminars, tutorials, presentations and journal clubs. Taught modules are assessed by unseen written examination and/or, written reports, oral presentations and coursework. The research project is assessed by the dissertation and oral presentation.

Further information on modules and degree structure available on the UCL Genetics Institute website.

**Degree structure**

**Mode:** Full-time: 1 year

**Location:** London, Bloomsbury

Students undertake modules to the value of 180 credits. The programme consists of four core modules (60 credits) and two specialist modules (30 credits) and a research project culminating in a dissertation (90 credits).

A Postgraduate Diploma consisting of six modules (four core modules in term one and two modules within the selected stream in term two) is offered, full-time nine months.

A Postgraduate Certificate consisting of four core modules in term one (60 credits) is offered, full-time three months.

### CORE MODULES

- Advanced Human Genetics: Research Principles
- Understanding Bioinformatics Resources and their Applications
- Human Genetics: Core Skills
- Basic Statistics for Medical Sciences

### SPECIALIST MODULES

- In term two you will take specialist modules depending on the specialist stream you select: Inherited Disease (A); Pharmacogenetics (B); Computational Genomics (C).
- Applications in Human Genetics (A)
- Either Genetics of Cardiovascular Disease or Genetics of Neurological Disease (A)
- Clinical Applications of Pharmacogenetic Tests (B)
- Anti-Cancer Personalised Medicine or Pharmacogenomics, adverse drug reactions and biomarkers (B)
- Applications in Human Genetics (C)
- Statistics for Interpreting Genetic Data (C)

### DISSERTATION/REPORT

- Students undertake an original research project investigating topical questions in genetics and genetics of human disease which culminates in a dissertation of 12,000 to 14,000 words and an oral presentation.
**Your career**

Advanced training in genetic techniques including bioinformatic and statistical approaches positions graduates well for PhD studentships in laboratories using genetic techniques to examine diseases such as heart disease, cancer and neurological disorders. Another large group will seek research jobs in the pharmaceutical industry, or jobs related to genetics in healthcare organisations.

Recent career destinations* include:

- Laboratory Specialist, King Abdullah Medical Complex
- Non-Clinical Research Associate, University of Oxford
- Trainee Geneticist, Oxford University Hospitals NHS Trust
- PhD in Cardiovascular Science, UCL
- Genomic Research Technician, Genome Centre

**Employability**

The MSc in Genetics of Human Disease facilitates acquisition of knowledge and skills relevant to a career in research in many different biomedical disciplines. About half of our graduates enter a research career by undertaking and completing PhDs and working as research associates/scientists in academia. Some of our graduates go on to jobs in the pharmaceutical industry, while others enter careers with clinical genetic diagnosis services, particularly in molecular genetics, in healthcare organisations and hospitals around the world. Those graduates with a prior medical training often utilise their new skills as clinical geneticists.

* Careers data is taken from the ‘Destinations of Leavers from Higher Education’ survey undertaken by HESA looking at the destinations of UK and EU students in the 2013-2015 graduating cohorts six months after graduation.
Entry requirements

Normally a minimum of an upper second-class UK Bachelor’s degree or an overseas qualification of an equivalent standard. Professional experience in the fields of health and development is desirable. An applicant whose qualifications vary from UCL standards may be admitted if evidence of an adequate academic background and extensive and relevant work experience in an appropriate field can be shown.

English language proficiency level

If your education has not been conducted in the English language, you will be expected to demonstrate evidence of an adequate level of English proficiency.

The level of English language proficiency for this programme is: Good. Information about the evidence required, acceptable qualifications and test providers is provided at: www.ucl.ac.uk/graduate/english-requirements

Your application

Students are advised to apply as early as possible due to competition for places. Those applying for scholarship funding (particularly overseas applicants) should take note of application deadlines.

Application fee: There is an application processing fee for this programme of £75 for online applications and £100 for paper applications. More details about the application fee can be found at www.ucl.ac.uk/prospective-students/graduate/taught/application.

FEES AND FUNDING 2018/19 ENTRY

- UK: £14,180 (FT)
- EU: £14,180 (FT)
- Overseas: £26,670 (FT)

The tuition fees shown are for the year indicated above. Fees for subsequent years may increase or otherwise vary. Further information on fee status, fee increases and the fee schedule can be viewed on the UCL Current Students website.

Full details of funding opportunities can be found on the UCL Scholarships website: www.ucl.ac.uk/scholarships

APPLICATION DEADLINE

All applicants: 27 July 2018

Details on how to apply are available on the website at: www.ucl.ac.uk/graduate/apply

CONTACT

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EU referendum

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/eu-referendum