BIOLOGICAL PHYSICS MSc / 2018/19 ENTRY

www.ucl.ac.uk/graduate/physast
This new programme prepares students for a career in the rapidly developing field of biological physics. Navigating across the boundaries of the established disciplines of biology and physics – using tools and techniques developed for one discipline to answer questions arising in another – students will also interact with experienced researchers in the laboratory from the outset.

**Degree summary**

Students gain broad background knowledge of cell and developmental biology, and physical theories and experimental physics techniques applied to biological systems. They also gain theoretical and working knowledge of techniques from physics and engineering used in biological physics research, including optical microscopy, microfabrication, and data analysis.

The new Biological Physics MSc brings together expertise in biological and physical sciences at UCL. In the last two years the UCL Institute for the Physics of Living Systems has been created to enhance the teaching and research opportunities in interdisciplinary physics and life sciences at UCL.

The necessity to cross traditional disciplinary boundaries is particularly true of biology where there is a growing realisation that understanding the physics underlying biological phenomena is critical in order to rationally develop next generation treatments for disease and solutions for food security in a globalised world.

Students are immersed in an active research environment from the outset, interacting with experienced researchers in the laboratory and familiarising themselves with state-of-the-art biological and biophysical research techniques.

Teaching is delivered through a combination of lectures, seminars and workshops and by an element of problem-centred learning, innovatively linking taught material to a set of student-selected research case studies. Taught modules are assessed by problem sets and examinations; 'hands-on' modules (e.g. BioMEMs and Microscopy Techniques) and research projects are assessed by presentations, assessed reports and the dissertation.

**Degree structure**

Mode: Full-time: 1 year
Location: London, Bloomsbury

Students undertake modules to the value of 180 credits. The programme consists of five core modules (90 credits), one optional module (30 credits) and a report (60 credits).

**CORE MODULES**
- Advanced Biophysical Theories
- BioMEMs and Microscopy Techniques
- Biosciences Research Skills
- Molecular Biophysics
- The Scientific Literature

**OPTIONAL MODULES**
- Students must select one of the following 30-credit modules:
  - Advanced Cell Biology
  - ABC – Analysis of Biological Complexity
  - And one of:
    - Aspects of Bioengineering
    - Image Processing
    - Introduction to Physical Techniques in the Life Sciences
    - Machine Vision
    - Matlab Programming for Biology
    - Mechanisms of Development
    - Statistics for Biology

**DISSERTATION/REPORT**
- All students undertake an independent research project which culminates in a report of 10,000 words.
Your career

This programme will prepare students for an increasingly interdisciplinary work and research environment in biological physics and quantitative biology and their applications in industrial research or academic settings.

Employability

The programme includes significant transferable skills components (e.g. scientific writing, presentations, outreach, innovation) which are highly relevant to future employability. Students gain a deep understanding of both the physics and biology underpinning phenomena observed in living systems - as well as direct knowledge of cutting-edge technologies likely to play a role in industrial development and academic research - while addressing key societal challenges (from cancer to healthy ageing).
Entry requirements

A minimum of an upper second-class Bachelor's degree in a relevant discipline from a UK university or an overseas qualification of an equivalent standard.

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: Standard.

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.

When we assess your application we would like to learn:

// why you want to study Biological Physics at graduate level
// why you want to study Biological Physics at UCL
// what particularly attracts you to the chosen programme
// how your academic and professional background meets the demands of this challenging programme
// where you would like to go professionally with your degree.

Together with essential academic requirements, the personal statement is your opportunity to illustrate whether your reasons for applying to this programme match what the programme will deliver.

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: £10,140 (FT), £N/A (PT)
// EU: £10,140 (FT), £N/A (PT)
// Overseas: £25,880 (FT), £N/A (PT)

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