NANOTECHNOLOGY MSc / 2018/19 ENTRY

www.ucl.ac.uk/graduate/eleceng
This MSc is designed for graduates from the physical sciences and relevant engineering disciplines who wish to develop skills in this new and exciting area. Nanotechnology is rapidly establishing itself as a key technology, in industries ranging from microelectronics to healthcare, with a consequent demand for appropriately trained graduates.

**Degree summary**

The programme introduces students to and provides training in the skills essential for almost all fields of nanotechnology research, including key laboratory skills and techniques in planning, building devices, analysis, and results comparison. The core lecture programme covers essential topics in physics, electrical and electronic engineering, and biology.

- The London Centre for Nanotechnology (LCN) is a new UK-based multidisciplinary enterprise operating at the forefront of science and technology.
- Forming a bridge between the physical and biomedical sciences, it brings together two of the world's leading institutions in nanotechnology, UCL (University College London) and Imperial College London.
- The centre aims to provide leading-edge training in nanotechnology and students on this programme benefit from excellent new facilities, including a £14 million research building furnished with state-of-the-art equipment, and a £1 million teaching facility in UCL Electronic & Electrical Engineering.

The programme is delivered through a combination of lectures, laboratory classes, tutorials and seminars. Student performance is assessed through coursework, laboratory notebooks, case studies, written examination, a dissertation, and written and oral presentations.

**Accreditation**

Accredited by the Institution of Engineering and Technology (IET) on behalf of the Engineering Council as meeting the requirements for Further Learning for registration as a Chartered Engineer. Candidates must hold a CEng accredited BEng/BSc (Hons) undergraduate first degree to comply with full CEng registration requirements.

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**Degree structure**

**Mode:** Full-time: 1 year; Part-time: 2 years

**Location:** London, Bloomsbury

Students undertake modules to the value of 180 credits. The programme consists of six core modules (75 credits), three optional modules (45 credits) and a research project (60 credits).

A Postgraduate Diploma (120 credits) is offered. The diploma consists of six core modules (75 credits) and three optional modules (45 credits).

### CORE MODULES
- Physical Science for Nanotechnology
- Nanoscale Processing and Characterisation for Advanced Devices
- Experimental Techniques for Nanotechnology
- Nanotechnology and Society
- Electrical Transport in Nanosystems
- Photonics in Nanosystems

### OPTIONAL MODULES
- Quantum Computation and Communication
- Order and Excitations in Condensed Matter
- Molecular Biophysics
- Molecular Physics
- Entrepreneurship: Theory and Practice
- Bioprocess Microfluidics
- Physics and Optics of Nano-Structures
- Materials and Nanomaterials
- Innovation Practices
- Physics of Advanced Materials

### DISSERTATION/REPORT
- All students undertake an extensive research project on an experimental or theoretical topic which is assessed through an interim report, dissertation and oral examination.
Your career

Recent graduates have gone on to work as engineers for companies including EDF Energy and Intel, as analysts and consultants for firms including Standard Bank PLC and DN Capital, or to undertake PhD study at the Universities of Oxford, Bath and Glasgow.

Recent career destinations* include:

// Business Analyst, Efficio
// EngD in Molecular Modelling and Materials Science, UCL
// PhD in Diamond Electronics, UCL
// Researcher, SCS (Sensor Coating Systems) and studying PhD in Materials, Imperial College London
// Junior Electronics Engineer, Samsung

Employability

This MSc programme provides a broad and comprehensive coverage of the technological and scientific foundations of nanotechnology, from the basis of the fabrication of nanostructures for advanced device applications, to fundamental quantum information and molecular biophysics, from nanotechnology in life science to nanotechnology in healthcare, and from experimental technology to theoretical modelling. Nanotechnology MSc graduates are expertly equipped either to pursue PhD study or become consultants or engineers in a wide range of nanotechnology fields.

* 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

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 Nanotechnology at graduate level
// why you want to study Nanotechnology at UCL
// what particularly attracts you to this programme
// how your academic and professional background meets the demands of this programme
// how you envisage your career path after the MSc.

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: £12,380 (FT), £6,190 (PT)
// EU: £12,380 (FT), £6,190 (PT)
// Overseas: £25,350 (FT), £12,950 (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.

The Institution of Engineering and Technology (IET) also awards competitive scholarships for postgraduate study, for details visit www.theiet.org

Please visit the UCL Electronic and Electrical Engineering Scholarships website for more information on funding.

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