NANOTECHNOLOGY AND REGENERATIVE MEDICINE MSc / 2018/19 ENTRY

www.ucl.ac.uk/graduate/surgery
Nanotechnology and Regenerative Medicine are rapidly expanding fields with the potential to revolutionise modern medicine. This cross-disciplinary programme provides students with a robust scientific understanding in these fields, combined with a "hands-on" practical and translational focus.

Degree summary

This programme will equip students with a critical understanding of:

- how nanotechnology can be harnessed for the improved detection and treatment of disease
- the use of stem cells in medicine
- tissue engineering strategies for tissue regeneration
- improving biomaterials for directing cell behaviour
- the regulatory, ethical and commercial hurdles for the translation of these emerging technologies.

Based within the world-leading medical research environment of the UCL Division of Surgery & Interventional Science this MSc retains a clinical focus and addresses real medicine needs. Students learn about the route of translation from research ideas into actual products which can benefit patients.

An in-depth laboratory-based research project is an integral component of the programme; expert support allows students to investigate cutting-edge projects and thereby open up opportunities for further research and publications.

Students are embedded within the vibrant research community of the Faculty of Medical Sciences which provides students - through research seminars, symposia and eminent guest lecturers - outstanding networking opportunities within the research, clinical and translational science communities.

The programme is delivered through a combination of lectures, tutorials, workshops, group discussions, practical sessions, and demonstrations. Assessment is through presentations, problem-solving workshops, written practical reports, coursework, unseen written examinations and the dissertation.

Degree structure

Mode: Full-time: 1 year; Part-time: 2 years; Flexible: up to 5 years
Location: London, Hampstead (Royal Free Hospital)

Part-time (2 years) will usually need to attend for approximately 1.5 days each week (October-February).

Students undertake modules to the value of 180 credits. The programme consists of five core modules (75 credits), one optional module (15 credits) and a research project (90 credits).

A PG Certificate (60 credits) is offered in Flexible/Modular study mode only, over a maximum two years. The programme consists of two core modules (30 credits) and two optional modules (30 credits).

### CORE MODULES
- Nanotechnology in Medicine *
- Applied Tissue Engineering *
- Biomaterials
- Research Methodologies
- Practical Bio-Nanotechnology and Regenerative Medicine
- *PG Cert - compulsory modules

### OPTIONAL MODULES
- Choose one of the following options; attendance at the other module is possible but will not be assessed.
- Stem Cells in Medicine and their Applications in Surgery
- Translation of Nanotechnology and Regenerative Medicine

### DISSERTATION/REPORT
- All students undertake an extensive laboratory-based (90 credits) research project which culminates in a dissertation of c.15,000 words and an individual viva voce.
Your career

Student career options and progression during and following the completion of the degree are considered to be of the utmost importance. Personal tutors will offer individual advice and seminars are arranged on a variety of career competencies including CV writing, writing research proposals and positive personal presentation.

Networking with world-leading scientists, new biotechnology CEO’s and clinicians is encouraged and enabled throughout the programme. Research output in terms of publishing papers and presenting at conferences is also promoted.

Recent career destinations include:
- Studying PhDs or Medicine at UCL, Imperial College London and Universities of Oxford and Cambridge
- Clinical PhD training programmes
- NHS hospitals in the UK
- EU and overseas hospitals and research facilities

Recent career destinations* include:
- Data Integrity Analyst, IMS Health
- Medical Device Analyst, GlobalData
- Tissue Processing Specialist Consultant, UCL
- PhD in Applied Engineering, Universidad de Navarra (University of Navarra)
- PhD in Bioengineering, Imperial College London

Employability

Graduates of the programme gain the transferable laboratory, critical and soft skills, such as science communication, necessary to pursue a scientific or clinical research career in the fields of nanomedicine and regenerative medicine.

* 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 a second-class UK Bachelor's degree in a science/engineering subject or a medical degree, or an overseas qualification of an equivalent standard. Research experience will also be taken into account.

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.

When we assess your application we would like to learn:
// why you want to study Nanotechnology and Regenerative Medicine at UCL
// what particularly attracts you to this programme
// how your academic and professional background meets the demands of this 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.