The Faculty of Medical Sciences is a powerhouse of medical science research and teaching, greatly enhanced by extensive collaborations with those in the physical sciences and the humanities, as well as with the National Health Service Trust and specialist hospitals. The environment for clinical translation is exceptional.

Cancer Institute 106
Eastman Dental Institute 107
Infection and Immunity 109
Medical Education 110
Medicine 111
Surgery and Interventional Science 112
Wolfson Institute for Biomedical Research 113
The UCL Cancer Institute carries the highly sought after ‘CR-UK centre’ status by Cancer Research UK in recognition of our research excellence.

A full-time postgraduate tutor within the institute follows the progression of students and provides mentoring.

The Postgraduate Society, in collaboration with the postgraduate tutor, organises monthly seminars and other events.

Our hub is a state-of-the-art building equipped with modern facilities for microscopy, cell culture, bioinformatics, molecular biology, cell biology, histology, genomics, and clinical research.

Research focuses on:
• Antibody-based therapeutics for imaging and treatment of cancer
• Brain cancer and stem cells
• Cellular and gene therapy for cancer
• Chromosomal DNA replication and cancer, drug-DNA interactions
• Effects of tumour biology on therapeutic response, tumour immunology
• Genetics of Sarcoma, Acute Leukaemia, Chronic Leukaemia and Myeloproliferative Diseases
• Medical genomics, cancer systems science and biomedical informatics
• Radiation biology and therapy
• Stratified personalised medicine
• Therapeutic drug-DNA interactions
• Translational projects, clinical trials and epidemiology
• Viral oncology.

Entry requirements
A minimum of an upper second-class UK Bachelor’s degree in a relevant discipline or an overseas qualification of an equivalent standard.

Career prospects
Graduates have taken up academic and clinical posts in the UK and abroad, at MIT, the Dana Farber Institute and the Institute of Molecular Medicine at Oxford University. They have been recruited for business consulting and technology transfer to industry, medical writing and also found employment in the IT sector.

Entry requirements
A minimum of a second-class UK Bachelor’s degree in a relevant discipline or an overseas qualification of an equivalent standard.

Career prospects
Graduates go on to further medical training or clinical posts, take up PhD studies or academic posts at institutions including the Universities of Cambridge, Oxford, Warwick, Manchester, Southampton, Zurich as well as UCL. They have also found employment in laboratory management, research, clinical trials, scientific writing and editing.
UCL’s Eastman Dental Institute (EDI) is one of the largest academic postgraduate dental centres in Europe, providing the widest portfolio of postgraduate degrees to nearly 560 dentists from 36 countries covering the UK, Europe and the rest of the world.

Our research students comprise scientists and clinicians working on projects supported by prestigious organisations including the European Commission, MRC, National Institute for Health Research, EPSRC, British Heart Foundation and industry leaders.

Our programmes are clinically intensive with favourable staff-student ratios, complemented by outstanding facilities including a state-of-the-art clinical teaching facility opened in 2010.

We were the first dental school to receive the prestigious Queen’s Anniversary Prize for Higher and Further Education, reflecting excellence in specialist training, research and patient care.

The institute has a global reputation for high quality research in three key areas:

- Biomaterials and tissue engineering: biomaterials for tissue regeneration; hard and soft tissue biology and repair
- Clinical research: wound healing; inflammation and infection; evidence-based oral health
- Microbial diseases: biofilms and ecology; genetics and virulence; cellular microbiology; antimicrobial strategies and resistance

Within these overarching areas, opportunities are available in a number of exciting areas including metagenomics, systems biology, nanotechnology, hospital-acquired infections and stem cells.

EDI provides a superb environment for research students to pursue interdisciplinary research and translational research programmes to solve both clinical and more fundamental biomedical science problems relevant to oral health.

The cutting-edge facilities, supported by platform technologies, enable students to engage in inventive and original research cultivated in an environment that is rich in world-class scholars.

Entry requirements
MPhil/PhD and MD(Res): applicants must hold a first or an upper second-class UK Bachelor’s degree in an appropriate subject, or an overseas
qualification of an equivalent standard, or a recognised taught Master’s degree.

The Paediatric Dentistry DDent is a clinically intensive programme (50% clinical training; 50% research component), therefore applicants must satisfy the entry requirements for taught programmes (see below).

**Career prospects**

Recent graduates with EDI research degrees have either continued on an academic career pathway by obtaining research or academic positions at leading universities, or have entered managerial or research positions in the health service, government or industry. Some graduates have secured prestigious specialist training posts.

**Taught programmes**

<table>
<thead>
<tr>
<th>Programme</th>
<th>FT</th>
<th>PT</th>
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<tbody>
<tr>
<td>Endodontontology MClinDent</td>
<td>FT2</td>
<td>PT3-4</td>
</tr>
<tr>
<td>Oral Surgery MClinDent</td>
<td>FT2</td>
<td></td>
</tr>
<tr>
<td>Orthodontics MClinDent</td>
<td>FT2</td>
<td></td>
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<tr>
<td>Periodontology MClinDent</td>
<td>FT3</td>
<td></td>
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<tr>
<td>Prosthodontics MClinDent</td>
<td>FT2</td>
<td>PT3-4</td>
</tr>
<tr>
<td>Endodontology (Advanced Training) MClinDent</td>
<td>FT3</td>
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<tr>
<td>Oral Surgery (Advanced Training) MClinDent</td>
<td>FT3</td>
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<tr>
<td>Orthodontics (Advanced Training) MClinDent</td>
<td>FT3</td>
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<tr>
<td>Prosthodontics (Advanced Training) MClinDent</td>
<td>FT3</td>
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<tr>
<td>Conservative Dentistry MSc</td>
<td>FT1</td>
<td>PT2</td>
</tr>
<tr>
<td>Endodontics MSc</td>
<td>FT1</td>
<td>PT2</td>
</tr>
<tr>
<td>Medical Bacteriology MSc</td>
<td>PT2</td>
<td></td>
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<tr>
<td>Oral and Maxillofacial Surgery MSc</td>
<td>FT1</td>
<td></td>
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<tr>
<td>Oral Medicine MSc</td>
<td>FT1</td>
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<tr>
<td>Restorative Dental Practice MSc</td>
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<td>PT1</td>
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<td>(flexible up to 5 years)</td>
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<tr>
<td>Postgraduate Diploma (flexible up to 5 years)</td>
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<tr>
<td>Postgraduate Certificate</td>
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<tr>
<td>Special Care Dentistry MSc</td>
<td>FT1</td>
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<tr>
<td>Endodontic Practice</td>
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<td>PT2</td>
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<tr>
<td>Postgraduate Diploma</td>
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<tr>
<td>Implant Dentistry</td>
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<td>PT3</td>
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<tr>
<td>Postgraduate Diploma</td>
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<tr>
<td>Special Care Dentistry (flexible up to 5 years)</td>
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<tr>
<td>Postgraduate Diploma (flexible up to 5 years)</td>
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<tr>
<td>Advanced Aesthetic Dentistry</td>
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<td>PT1</td>
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<td>Postgraduate Certificate</td>
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<tr>
<td>Dental Sedation and Pain Management</td>
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<td>PT1</td>
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<tr>
<td>Postgraduate Certificate</td>
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<tr>
<td>Paediatric Dentistry</td>
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<td>PT1</td>
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<tr>
<td>Postgraduate Certificate</td>
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<tr>
<td>Special Care Dentistry</td>
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<td>PT1</td>
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<tr>
<td>Postgraduate Certificate</td>
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In some specialties the institute offers both a two-year MClinDent programme and a three-year MClinDent (Advanced Training) programme. Please refer to the EDI website (www.ucl.ac.uk/eastman/education) for information on which programme is most suitable for you.

**Entry requirements**

All applicants must normally hold an approved dental qualification and have a minimum of two years’ clinical experience.

**Career prospects**

Recent graduates have furthered their careers in the public sector by taking up positions in NHS hospitals, primary care trusts and the Armed Forces. Many become leaders of specialist services in primary care or enter training towards Consultant status. In the private sector, graduates either practise as specialists or are able to develop their general practice. A UCL Eastman qualification is highly regarded by employers both in the UK and overseas. A number of graduates follow an academic career pathway and either take up a position in an academic department or continue on to further clinical or research training.
The Division of Infection and Immunity is an integral part of the UCL Partners’ Infectious Diseases Programme and hosts the MRC Centre for Medical Molecular Virology.

We hold a $25 million award from the Bill and Melinda Gates Foundation for research into HIV and AIDS.

Our unique four-year MRC-funded PhD programme provides integrated research training at the interface of basic science and clinical practice.

A significant number of research training fellowships have been won from major sponsors such as Wellcome Trust, MRC and BBSRC.

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Principal research areas are:
- Cytomegalovirus and transplantation
- Dendritic cell biology
- Gene therapy
- Herpes viruses
- HIV and retroviruses
- Host-pathogen interaction
- Immunity to hepatits
- Immunology of ageing
- Innate and adaptive immunity
- Primary immune deficiency
- Regulatory T cells
- Rheumatology
- Signal transduction in the immune system
- Tuberculosis
- Tumour immunity
- Vaccines.

Entry requirements
A minimum of an upper second-class UK Bachelor’s degree in a relevant discipline, or an overseas qualification of an equivalent standard, or an appropriate Master’s degree.

Career prospects
Recent graduates have secured postdoctoral positions in universities or research institutions in the UK, Europe, the US and Iran, including the MRC National Institute for Medical Research, Harvard Medical School, UCLH Royal Free Hospital, Imperial College London; Tehran University of Medical Sciences and the BBSRC. Others are working in research and development for pharmaceutical and biotechnology companies or in scientific journalism.

Entry requirements
Molecular Medicine MSc: applicants must hold a minimum of an upper second-class UK Bachelor’s degree in a scientific, veterinary or medical discipline or an overseas qualification of an equivalent standard. Applicants with a lower second-class UK Bachelor’s degree (or its overseas equivalent) will be considered but would be expected to have worked in a research laboratory for six months continuously or in some other way demonstrate that they have made significant and relevant additional achievement since graduation.

All other MSc programmes: applicants must hold a minimum of a second-class UK Bachelor’s degree in biomedical science or medicine or an overseas qualification of an equivalent standard.

Career prospects
Students graduating from the Molecular Medicine MSc and Infection and Immunity MSc generally continue to PhD studies in the UK or abroad, enter medical school or take up research positions in academic or industry. No data is currently available for the Healthcare Associated Infection Control MSc.

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Research programmes and Molecular Medicine MSc:
Ms Lauren Collins
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Healthcare Associated Infection Control MSc:
Miss Sangita Patel
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TEL +44 (0)20 7794 0500 (ext 33539)

Infection and Immunity MSc and Medical Mycology MSc:
Ms Anne Dickens
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Tuition fees
Up-to-date tuition fee information is available at www.ucl.ac.uk/current-students/money

Funding
MRC studentships, usually 2–3 each year. Further information is available at www.ucl.ac.uk/infection-immunity/mrc_ucl-centre

Further information on pages 26–31

Related departments
Cancer Institute, page 106
Child Health, page 117
Laboratory for Molecular Cell Biology, page 94
MEDICAL EDUCATION

Medical Education co-ordinates developments in medical teaching and education and addresses curriculum development, academic standards, the assessment process, clinical and generic skills acquisition and research.

Our Medical Education programmes are taught jointly with the Royal College of Physicians of London and benefit from the Jerwood Resource Centre, a world-class medical education library.

Our collaboration with the Royal College of Physicians attracts teaching input from experts from across the UK.

Entry requirements
A primary medical qualification and Master’s level study, preferably in the field of education or medical education, from a UK university or an overseas qualification of an equivalent standard.

Career prospects
A PhD in medical education prepares graduates for a substantive future career as an educational researcher. Whilst many clinical practitioners will continue to practice in healthcare this award carries with it the opportunity to develop an academic role either in undergraduate or postgraduate education.

Israa Al-Shakarchi
Medical Education Postgraduate Certificate

I was an undergraduate Physiology Student at UCL and loved it. Of all the available Postgraduate Medical/Clinical Education Certificates available across the country, I believe the Royal College of Physicians of London/UCL programme is the best and most prestigious. I love teaching and formal education training is a rapidly growing field within medicine. This programme provided me with the foundations to improve my teaching, and taught me the underlying principles and evidence behind the various teaching techniques. London is a fabulous city to live, study and work in. Although a daunting city for those new to it, this is quickly overcome as UCL provides the facilities and networks for you to meet others easily. The academic resources available to students are hard to match elsewhere, and the opportunities that London itself has to offer are endless.

Research programmes

<table>
<thead>
<tr>
<th>MPhil/PhD</th>
<th>FT</th>
<th>PT</th>
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<tr>
<th>Taught programmes</th>
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<tbody>
<tr>
<td>Medical Education MSc</td>
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<tr>
<td>Postgraduate Diploma</td>
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<tr>
<td>Postgraduate Certificate (jointly with the Royal College of Physicians of London)</td>
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</tbody>
</table>

For Medical Education, application is to the Postgraduate Certificate in the first instance. Successful completion of the one-year Certificate leads to eligibility to study for a further year for the Postgraduate Diploma, and success in the Diploma leads to eligibility for a final year to study to Master’s level.

Entry requirements
Entry to the Postgraduate Certificate in Medical Education requires a primary medical qualification. Admission to the Postgraduate Diploma requires attainment of a Postgraduate Certificate in Medical Education or its equivalent. Progression to Master’s level is dependent on successful completion of the Royal College of Physicians of London/UCL Postgraduate Diploma.

Career prospects
Most graduates remain clinical professionals primarily, however many take on more teaching- or education-orientated roles in either undergraduate or graduate education.

Research areas are:
• Assessment
• Communication skills
• E-learning
• Equality and diversity in medical education
• Fitness to practise of doctors
• Interprofessional education
• Peer-assisted learning
• Professional identity
• Selection
• Transitions
• Work-based learning.

Contact details
Research programmes:
Dr Ann Griffin
EMAIL a.griffin@ucl.ac.uk
TEL +44 (0)20 7288 3157

Taught programmes:
Ms Melanie Harradine
EMAIL education.courses@rcplondon.ac.uk
TEL +44 (0)20 3075 1562

Tuition fees
Up-to-date tuition fee information is available at www.ucl.ac.uk/current-students/money

Funding
Further information on pages 26–31
Medicine is a multi-disciplinary division incorporating a spectrum of specialties and a wide range of scientific, clinical and educational expertise.

Students benefit from productive collaborations between scientists and clinical researchers and exposure to the clinical aspects of research activities.

The division has access to world-class research facilities and equipment, including the Centre for Biomedical Research at our Royal Free campus and the Clinical Research Facility at University College London Hospital (UCLH).

Research programmes

<table>
<thead>
<tr>
<th>Programme</th>
<th>FT</th>
<th>PT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPhil/PhD</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>MPhil/PhD</td>
<td>4</td>
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<tr>
<td>MD(Res)</td>
<td>2</td>
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</tbody>
</table>

The biomedical disciplines represented within the units of the Division of Medicine include:

- Amyloidosis and acute phase proteins
- Cardiovascular biology
- Clinical pharmacology
- Diabetes and endocrinology
- Gastroenterology and nutrition
- Hepatology
- Intensive care medicine
- Medical imaging
- Molecular cell biology
- Molecular medicine
- Nephrology
- Neuroendocrinology
- Nuclear medicine
- Obesity research
- Radiochemistry
- Respiratory research
- Rheumatology

Entry requirements

A first or an upper second-class UK Bachelor’s degree in an appropriate subject, or an overseas qualification of an equivalent standard from a university or educational institution of university rank, or a recognised taught Master’s degree.

Career prospects

Recent research graduates are in demand for academic, postdoctoral and scientific advisory positions, nationally and internationally.

Contact details

Research programmes: Ms Tricia O’Dell
EMAIL tricia.odell@ucl.ac.uk
TEL +44 (0)20 7679 0752

Taught programmes: Gemma Martin
EMAIL gemma.martin@ucl.ac.uk
TEL +44 (0)20 3108 2308

Tuition fees

Up-to-date tuition fee information is available at www.ucl.ac.uk/current-students/money

Funding

Research council studentships and fellowships are occasionally available for MPhil/PhD students. Opportunities may also exist for studentships funded by the Division of Medicine and the Faculty of Medical Sciences.

One scholarship is available to UK/EU applicants to pursue MPhil/PhD research in the Centre for Hepatology; the studentship is tenable for up to three years.

Further information on pages 26–31
Our major research departments include: General Surgery; Urology; Sports, Exercise and Health; and Orthopaedics and Musculoskeletal Science.

We host world-class research centres in stem cell applications, urology, sports science, tissue engineering in surgery, clinical trials, transplantation, and cutting-edge developments of organ-based and technology-driven medical devices (including nanotechnology).

We have collaborative partnerships with centres across the world.

Research focuses on the following areas:
- **Nanotechnology and regenerative medicine**: targeted cell delivery; cell–material interactions; tissue engineering; nanomedicine; biomaterials; biosensors; nanoscale surface structuring
- **Orthopaedics and musculoskeletal science**: osteoporosis; bone tumour biology; joint replacement; tissue engineering; biomedical engineering; imaging and materials science; performance/rehabilitation; peripheral nerve and spinal injury
- **Sports science**: the extreme environment, surgical optimisation, orthopaedic outcomes, hip deformity, and human health and performance
- **Surgery**: cancer surgery; tissue engineering; reconstructive surgery; transplantation; vascular surgery; surgical implants
- **Urology**: interventional oncology; surgical and patient-related outcomes; molecular and stem cell biology; new medical device development

**Entry requirements**

- MPhil/PhD: an upper second-class UK Bachelor’s degree in a relevant engineering/science subject or a medical degree (MBBS), or an overseas qualification of an equivalent standard.
- MD(Res): a medical degree (MBBS) or an overseas qualification of an equivalent standard.
- Doctorate in Orthopaedics: MBBS, MRCS and a higher surgical training number in Orthopaedics or a medical degree, GMC registration and MRCS, or an overseas qualification of equivalent standard.

**Career prospects**

Graduates often take up consultant/clinical academic posts or become specialist registrars, and pursue careers in science, elite sport, physical activity promotion, and biomedical industries.

**Taught programmes**

<table>
<thead>
<tr>
<th>Programme</th>
<th>Fee Structure</th>
<th>FT</th>
<th>PT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burns, Plastic and Reconstructive Surgery MSc</td>
<td>FT1 PT2</td>
<td></td>
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<tr>
<td>Evidence-based Healthcare MSc</td>
<td>FT1 PT2-4</td>
<td>FT9m PT3</td>
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</tr>
<tr>
<td>Postgraduate Diploma</td>
<td>FT3m</td>
<td>PT2</td>
<td></td>
</tr>
<tr>
<td>Musclekeletal Science MSc</td>
<td>FT1 PT2-5</td>
<td>FT9m PT2-5</td>
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</tr>
<tr>
<td>Postgraduate Diploma</td>
<td>FT3m</td>
<td></td>
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</tr>
<tr>
<td>Nanotechnology and Regenerative Medicine MSc</td>
<td>FT1 PT2</td>
<td></td>
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<tr>
<td>Postgraduate Certificate</td>
<td>FT3m</td>
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<tr>
<td>Performing Arts Medicine MSc</td>
<td>FT1 PT2</td>
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<tr>
<td>Sports Medicine, Exercise and Health MSc</td>
<td>FT1 PT2</td>
<td>FT9m PT2</td>
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<tr>
<td>Postgraduate Diploma</td>
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<tr>
<td>Surgical Science MSc</td>
<td>FT1 PT2</td>
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<tr>
<td>Trauma and Orthopaedics MSc</td>
<td>FT1 PT2-4</td>
<td>FT9m-3</td>
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<td>Postgraduate Diploma</td>
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<td>PT6m-2</td>
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<tr>
<td>Urology MSc</td>
<td>PT1-4</td>
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<tr>
<td>Urology Postgraduate Diploma</td>
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**Tuition fees**

Up-to-date tuition fee information is available at www.ucl.ac.uk/current-students/money

**Related departments**

- Chemistry, page 96
- Mechanical Engineering, page 80
- Medical Physics and Bioengineering, page 81
The strength of the Wolfson Institute for Biomedical Research (WIBR) is in its multi-disciplinary approach to research, with the goal of identifying novel targets for drug development and new therapies.

The WIBR brings together scientists and clinicians from both academic and pharmaceutical industry backgrounds and integrates basic research with clinical applications.

We are equipped with ultra-modern facilities for pharmacology, electrophysiology, molecular biology, cell biology, histology, bioinformatics, medicinal chemistry and clinical research.

The Wolfson Institute for Biomedical Research (WIBR) is an interdisciplinary research institute located at University College London (UCL). Its mission is to advance biomedical research through groundbreaking studies in various scientific fields. The institute is known for its multi-disciplinary approach, which fosters collaboration among scientists and clinicians from both academia and pharmaceutical industry backgrounds. The WIBR is equipped with ultra-modern facilities to support research in areas such as pharmacology, electrophysiology, molecular biology, cell biology, histology, bioinformatics, medicinal chemistry, and clinical research.

The institute offers research programmes such as the PhD and MSc in Drug Design. The PhD programme focuses on research areas like biological and medicinal chemistry, cardiovascular research, developmental neuroscience, DNA replication and human disease, intensive care medicine, molecular mechanisms of cancer, nitric oxide physiology and pathophysiology, neuroscience, neural computation, neural signalling, neural plasticity, neurodegeneration and neurochemistry, oncogenic receptor signalling, and stem cell biology.

The MSc in Drug Design provides a comprehensive understanding of drug design principles, from target identification to clinical development. The programme is designed to equip students with the necessary skills for careers in the pharmaceutical industry, academia, or regulatory agencies. The entry requirements for the MSc include a minimum of an upper second-class UK Bachelor’s degree in a relevant discipline or an overseas qualification of an equivalent standard.

Career prospects for graduates from both programmes are diverse, with opportunities in academia, industry, or regulatory roles. Many graduates have secured positions at prestigious research charities such as the Wellcome Trust and Cancer Research UK.

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TEL +44 (0)20 7679 0959

Tuition fees:

Up-to-date tuition fee information is available at www.ucl.ac.uk/current-students/money

Funding:

Further information on pages 26–31

Related departments:

Cancer Institute, page 106
Cardiovascular Science, page 116
Cell and Developmental Biology, page 87
Neuroscience, Physiology and Pharmacology, page 90