



University College Dublin  
Ireland's Global University



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## MSc Biotechnology (One Year Full Time)

Biotechnology encompasses all aspects of the industrial application of living organisms and/or biological techniques. It is a collection of technologies that capitalise on the attributes of cells and biological molecules, such as DNA to work for us. The primary biotechnology activity carried out in Ireland is research and development. Ireland has experienced massive growth across the biotechnology sector including food, environmental and pharmaceutical industries in the last decade.

Ireland is home to 9 of the top 10 global pharmaceutical and biotechnology companies, such as GlaxoSmithKline, Pfizer, Merck, Bristol-

Myers Squibb and Genzyme, with 7 of the 10 world blockbuster pharmaceuticals made here. The MSc in Biotechnology is taught by leading academics in the UCD School of Biomolecular and Biomedical Science and focuses on broadening your knowledge and understanding of the current technologies and processes in the biotechnology industry, including approaches being applied to further advance the discovery and design of new and highly innovative biotech and pharmaceutical products and technologies. It also provides modules on food and environmental biotechnology, as well as industrially relevant expertise in facility design, bioprocess technology, regulatory affairs and clinical trials.

### Key Fact

During the third semester you will conduct research in an academic or industrial lab. Projects will be carried out within research groups of the UCD School of Biomolecular and Biomedical using state-of-the-art laboratory and computational facilities or in Irish and multinational biotechnology companies, across the spectrum of the dynamic biotechnology industry in Ireland.

## Why study at UCD?



### Tradition

Established 1854, with 160 years of teaching & research excellence



### Global profile

UCD is ranked in the top 1% of higher education institutions worldwide



### Global community

Over 6,000 international students from over 120 countries study at UCD



### Global careers

Degrees with high employability; dedicated careers support; 1 year stay-back visa



### Safety

Modern parkland campus with 24 hour security, minutes from Dublin city centre

## Course Content and Structure

**90 credits**  
taught masters

**60 credits**  
taught modules

**30 credits**  
Individual Research Project

**You will gain experimental and theoretical knowledge in the following topics:**

- Pharmacology and Drug Development
- Medical Device Technology
- Biomedical Diagnostics
- Recombinant DNA Technology
- Microbial and Animal Cell Culture
- Food Biotechnology
- Facility Design
- Environmental Biotechnology
- Regulatory Affairs
- Drug Development and Clinical Trials
- Bioprocessing Laboratory Technology

### Assessment

- Your work will be assessed using a variety of methods including coursework, group and individual reports, written and online exams, and presentations.



Modules and topics shown are subject to change and are not guaranteed by UCD.

## Career Opportunities

This advanced graduate degree in Biotechnology has been developed in consultation with employers and therefore is recognised and valued by them. A key feature is the opportunity to carry out a project in industry which will allow graduates to develop connections with prospective employers, thereby enhancing chances of employment on graduation. You will also have the opportunity to become part of a network of alumni in the field of Biotechnology.

Prospective employers include Abbott; Allergan; Amgen; Baxter Healthcare; Beckman Coulter; Biotrin International Ltd.; Boston Scientific; Elan Corporation; Eli Lilly and Co.; Celltech; Glaxo SmithKline; Icon Clinical Research; Johnson & Johnson Ltd.; Kerry Group Plc.; Merck Sharp & Dohme; Quintiles; Sandoz; Serology Ltd.



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## Fees and Scholarships

Tuition fee information is available on [www.ucd.ie/fees](http://www.ucd.ie/fees). Please note that UCD offer a number of postgraduate scholarships for full-time, self-funding international students, holding an offer of a place on master's programmes. Please see [www.ucd.ie/international/scholarships](http://www.ucd.ie/international/scholarships) for further information.

## Facilities and Resources

- The UCD School of Biomolecular and Biomedical Science is closely linked to the UCD Conway Institute of Biomedical and Biomolecular research which provides cutting edge core technologies including the premier Mass Spectrometry Resource in the country, NMR spectroscopy, real time PCR, electron microscopy, light microscopy, digital pathology and flow cytometry.

## Apply Now

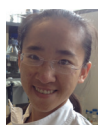
This programme receives significant interest so please apply early online at [www.ucd.ie/apply](http://www.ucd.ie/apply)

## Entry Requirements

- Candidates are expected to have an upper second class honours grade or international equivalent in a biology or chemistry primary degree with a significant laboratory component. This includes a BSc in Biotechnology, Biochemistry, Microbiology, Genetics, Neuroscience, Pharmacology, Physiology, Medicinal Chemistry or an equivalent qualification. Graduates with equivalent qualifications in related areas of science and technology or with proven relevant industrial experience will be considered for places.
- Applicants whose first language is not English must also demonstrate English language proficiency of IELTS 6.5 (no band less than 6.0 in each element), or equivalent.

## Graduate Profile

Qinxi Ma, PhD student at University College Dublin



I am an international student from China and I am doing my PhD in Genetics, having completed

my MSc Biotechnology degree at UCD. A focus on emerging issues and technologies in this programme really helped my study, while enhancing my knowledge and understanding of the biotechnology area helped me to build up an academic career path. It was a great opportunity for me to combine academic learning and practical skills. I enjoyed working with classmates from many different backgrounds. Overall, it was a fantastic, fulfilling and memorable year as a masters student in UCD.

## Accommodation

UCD has accommodation for over 2,500 students across five locations. Places are limited and more information is available at [www.ucd.ie/residences/](http://www.ucd.ie/residences/). For information and advice on living off campus, please contact the UCD Residences Off-Campus Office or the UCD Student Union Accommodation Services. Please visit [www.ucd.ie/residences/accommodation-booking-support/](http://www.ucd.ie/residences/accommodation-booking-support/) for further details.

## Related Masters Programmes of Interest

- MSc Biotechnology & Business
- MSc Plant Biology & Biotechnology

## EU Enquiries

Dr David O'Connell ✉ : [biotech@ucd.ie](mailto:biotech@ucd.ie)  
[www.ucd.ie/graduatestudies](http://www.ucd.ie/graduatestudies)  
[www.ucd.ie/biotech](http://www.ucd.ie/biotech)

UCD School of Biomolecular and Biomedical Science, University College Dublin, Belfield, Dublin 4

**Non-EU Enquiries** ✉ : [internationaladmissions@ucd.ie](mailto:internationaladmissions@ucd.ie)  
[www.ucd.ie/international](http://www.ucd.ie/international)