



University College Dublin  
Ireland's Global University



## MEngSc BIOPHARMACEUTICAL ENGINEERING (TWO YEARS PART TIME)

Pharmaceutical and Biopharmaceutical manufacturing are key sectors in the Irish economy generating over 50 per cent of GDP. This sector has seen continued and sustained success with a number of high profile investments in recent years providing excellent job opportunities for graduates. The programme and its academic faculty are closely linked with the National Institute for Bioprocessing Research and Training (NIBRT), which is a global centre of excellence for training and research in bioprocessing.

The MEngSc in Biopharmaceutical Engineering programme provides substantial coverage of scientific, technical, management and regulatory issues associated with this industry. The aim of this programme is to offer an internationally recognised high quality flexible curriculum, which follows the latest developments in science and technology. This programme is suitable for Science and Engineering graduates wishing to obtain a qualification which is highly relevant to the biopharmaceutical industry.

### 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 rankings

Delivered by a school ranked 151-200 in the QS Subject Rankings.



#### Safety

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

### WORLD CLASS FACILITIES

The teaching for this Masters takes place at the NIBRT facility, UCD, which is a purpose-built, multi-functional building replicating the most modern industrial bioprocessing facility. The total building area is approximately 6,500 m<sup>2</sup> over two floors.

## COURSE CONTENT AND STRUCTURE

**90 credits**  
taught masters

**60 credits**  
taught modules

**30 credits**  
research project

The programme provides students with an understanding of the principle scientific and engineering challenges involved in the design, operation and management of biopharmaceutical production facilities. Modules include:

#### Modules Year 1 :

Biotechnology & Biopharma, Animal Cell Culture Technology, Lean Sigma, Downstream Processing & Sterile Fill Finish, Principles of Biopharmaceutical Engineering, Bioprocessing Labs.

#### Modules Year 2 :

Facility Design & Operation, Research Methodologies, Bioanalytical Science for Biopharma, Industry Regulation & Management, Bioprocess Scale-up & Tech Transfer, Commissioning & Qualification.

Students complete 6 modules in year 1 and 6 modules in year 2.

Students complete a 30-credit research project in their workplace in Year 2.





## CAREER OPPORTUNITIES

This programme is suitable for Science and Engineering graduates currently working in the Pharma/Biopharma Industry or those wishing to move into this sector. The course content addresses the principle scientific and engineering challenges involved in the design, operation and management of biopharmaceutical production facilities. This is an advanced postgraduate degree programme offering a combination of lectures, tutorials and practicals delivered by university and industry experts.



## CLASS TIMES

Classes take place every Friday afternoon (during UCD term time) between 14.00 - 18.00 at the NIBRT facility, Belfield Campus, UCD.

## APPLY NOW

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

## ENTRY REQUIREMENTS

- A 4-year bachelor's degree with a minimum upper second class honours (NFQ level 8) or international equivalent in a relevant Engineering, Science or Technology programme.
- 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.
- Students must be working full-time in the Pharma/Biopharma or a related sector.

## RELATED MASTERS PROGRAMMES OF INTEREST

- MEngSc Biopharmaceutical Engineering full-time
- MEngSc Chemical Engineering
- Masters of Engineering Management (MEM) part-time.

## FEES

Fee information is available [www.ucd.ie/fees](http://www.ucd.ie/fees)



## GRADUATE PROFILE

### Kate Ohle

I undertook the Masters in Biopharmaceutical Engineering at UCD to build on my degree in Chemical and Biopharmaceutical Engineering and to pursue opportunities in a growing industry. The course content was substantial. It was up-to-date with both the current state of industry and cutting edge developments. I was able to complete the Masters while working full-time, as the lecture time-slots and assignments could be managed around my work/life balance. The lecturers were supportive and flexible in facilitating work commitments in terms of lectures and assignment submissions. UCD and NIBRT have a prestigious reputation in Industry, this was another reason I chose to do my Masters there. I would recommend this Masters to people who wish to develop themselves in the biopharmaceutical industry.

## CONTACT US

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