University College Dublin
Ireland's Global University

MEngSc CHEMICAL ENGINEERING (ONE YEAR FULL TIME)

The Chemical Engineering industry in Ireland is one of its strongest exporting sectors and is representative of the chemical process industries worldwide. Opportunities for employment exist in a broad range of areas including: the pharmaceutical industry, the petrochemical and energy industries, the ICT industries including medical devices, and the heavy chemicals industries.

The MEngSc in Chemical Engineering offers advanced level education for students with bachelor degrees in chemical engineering/ technology programmes. On this programme you will improve your conceptual and practical skills in both the fundamental and applied principles of chemical engineering practice. The programme covers advanced topics in chemical engineering and includes extensive project work in both design (featuring both individual and team elements/efforts) and in an individualised research project.

TOP INTERNATIONAL RANKING

This programme is delivered by a highly research-intensive School holding 101-150 in the QS World Subject Rankings and Top 6 in Ireland/UK Employer's and Research rankings and awarded €9.56 million in research funding between 2014-19.

WHY STUDY AT UCD?

Tradition
Established 1854, with 160 years of teaching and research excellence

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

Global community
Over 8,400 international students from over 140 countries study at UCD

Global careers
Degrees with high employability; dedicated careers support; two-year stay-back visa (for non-EU students)

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

COURSE CONTENT AND STRUCTURE

90 credits taught master's | **60 credits** taught modules | **30 credits** project

Core modules include:

- Advanced Experimental Design
- Advanced Heat Transfer and Fluid Mechanics
- Advanced Process Design
- Advanced Separation Processes
- Chemical & Bioprocess Engineering Design
- Chemical & Bioprocess Reaction Engineering
- Chemical Processes of Sustainable & Renewable Energy
- Environmental Engineering
- Process Instrumentation & Control

Optional modules include:

- Advanced Characterisation Techniques
- Bioreactor Modelling and Control

The programme's teaching methods are highly interactive and varied with contributions from a combination of industrial practitioners and leading researchers in their fields.

Course code: T218

CAREER OPPORTUNITIES

Your career opportunities upon graduation from this programme are exemplary. It is anticipated that the graduates will play an important role in the development, design and operation of chemical processes in industry at international level in the coming years.
Graduates can enter a wide selection of possible industries including fine chemicals (e.g., Proctor and Gamble), heavy chemicals (e.g., CRH), pharmaceuticals (e.g., Lilly, Merck, Pfizer), oil and gas (e.g., Chevron, Conoco Philips, Exxon, Shell), as well as consulting and business.

FACILITIES AND RESOURCES

The UCD School of Chemical & Bioprocess Engineering is home to a €5 million state-of-the-art microscopy laboratory which includes FIB-SEM, a Cryo-TEM and a high end XPS/AES/SIMS facility, as well as a range of analytical tools including AFM, FTIR, UV-Vis and chromatography (HPLC/GC-MS). Laboratory facilities available for project work include multiphase flow apparatus, membrane reactors, vacuum pressure swing adsorption for gas separations, atomic layer deposition and chemical bath deposition apparatus, a suite of photoelectrochemical facilities including solar simulators and potentiostats for solar cell work, and preparatory laboratories for the synthesis of proprietary materials and access to plasma deposition systems with concomitant analytical tools (e.g., ellipsometry).

APPLY NOW

This programme receives significant interest so please apply early online at 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 chemical engineering 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 who do not meet the IELTS requirement may wish to consider taking the Pre-Sessional or Pre-Masters Pathway. Full details https://www.ucd.ie/alc/programmes/pathways/

SCHOLARSHIPS

- Dedicated scholarships for non-EU students
  - Apply for University Scholarship www.ucd.ie/global/study-at-ucdscholarshipsfinances/scholarships/
  - Apply for College scholarship www.ucd.ie/eacollege/study/noneuscholarships
- Approved by US Dept of Education for federally supported loans

WORK IN IRELAND

Option to stay in Ireland to seek employment and/or work for 2 years after graduating.

FEES

Fee information is available at www.ucd.ie/fees

RELATED MASTER'S PROGRAMMES OF INTEREST

- MEngSc Biopharmaceutical Engineering
- MSc Biotechnology

GRADUATE PROFILE

Mary Taiwo Ajide

Holding a first-class honours degree in Chemical Engineering from my home country, Nigeria, I have always been passionate about advancing my knowledge internationally in the field of Chemical Engineering. The Education in Ireland fair organised in Nigeria opened my mind to the numerous opportunities that earning a master's degree in Chemical Engineering from UCD brings. Graduating with an honours degree in MEngSc from UCD, which is the top university in Ireland and is ranked within the top 1% of higher education institutions world wide has contributed to my receiving job offers from Ireland and Australia. The teaching, learning ideology and philosophy at UCD contributed to my development and design of chemical processes in industry at international levels. I am very grateful to the advancement in my career that UCD has provided me. I believe that the additional knowledge and skills acquired from UCD has contributed to my performance in undertaking cutting-edge design and research projects and will continue to help me earn leading roles in the industry.

CONTACT US

EU Students – Katie O'Neill E: katie.oneill@ucd.ie **T:** +353 1 716 1781 **W:** www.ucd.ie/eacollege
International Students – E: eamarketing@ucd.ie/international@ucd.ie **T:** +353 1 716 8500 W: www.ucd.ie/global