

University College Dublin Ireland's Global University



# ME BIOSYSTEMS & FOOD ENGINEERING (TWO YEARS FULL TIME)

This Master's will provide graduates from an engineering background the opportunity to specialise in the application of engineering science and design to biological materials and systems, especially in:

- · Food process engineering
- · Sustainable energy
- Environmental protection

Biosystems Engineers are at the forefront of the search for practical solutions to global problems and this specialisation will lead graduates to a wide variety of employment opportunities with companies focussing on processing of food and other biological materials, environmental protection, waste recycling, sustainable energy and green technologies.

# DELIVERED BY A HIGHLY RESEARCH-INTENSIVE SCHOOL

This programme is delivered by a highly research-intensive School comprising a European Research Council Fellow and six Marie Curie Fellowships. Professors Sun and O'Donnell are in the world's top one percent of the most cited scientists in their field. The UCD School of Biosystems & Food Engineering also consistently wins up to €3 million in annual research funding.

#### WHY STUDY AT UCD?



# Professional Work Experience

6-8 month Professional Work Experience -internship opportunity



#### **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 8,500 international students from over 130 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**

**120 credits** taught master's

**65 credits** taught modules

**30 credits** work placemen

**25 credits** research thesis

The ME Biosystems & Food Engineering involves lectures, tutorials, assignments, laboratory work, a research project and professional work experience. Indicative module List:

- Advanced Environmental Engineering
- Air Pollution
- Biofuels and Renewable Energies
- Building and Environment
- Food Chain Integrity
- Please see online for a full list of modules
- Food Process Engineering
- Food Refrigeration
- Life Cycle Assessment
- Quantitative Risk Assessment
- Waste Management





Our graduates can find employment in:

- Bioprocess and food companies
- Environmental protection and waste recycling companies
- Sustainable energy and green technology companies



There are also opportunities to pursue PhD research in UCD and worldwide.

#### **FACILITIES AND RESOURCES**

The School of Biosystems & Food Engineering has recently invested in excess of €600,000 in state-of-the-art facilities in spectroscopy, hyperspectral chemical imaging and chemometrics.

#### **APPLY NOW**

This programme receives significant interest so please apply early online at www.ucd.ie/apply

# **ENTRY REQUIREMENTS**

- A bachelor's degree with a minimum upper second class honours (NFQ level 8) or international equivalent in a relevant 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/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 Food Engineering
- MSc Environmental Technology
- MSc Sustainable Energy & Green Technologies



# **GRADUATE PROFILE**

# Nandhini Sabesan Alexion Pharmaceuticals

I chose to pursue the ME Biosystems and Food Engineering in UCD, because the programme placed equal emphasis on developing the subject knowledge as well as the professional skills required by the industry. The programme offered flexibility to pick a range of modules in varying disciplines such as bioprocess, food, and environmental engineering. The professors were very encouraging and prompt in taking care of student needs. The industrial visits to a beef processing factory, milk factory and biogas plant were very informative and full of fun. I also undertook many informative sessions offered by UCD Library to enhance my writing and presentation skills. The UCD Career Development Centre was very supportive too and it helped equip me to secure an internship (part of the curriculum) with Irish Water for a period of 8 months. The internship was vital for me to understand workplace requirements and cultivate the requisite professional skills accordingly.