University College Dublin
Ireland's Global University

Course code: T277, T278

MEngSc Water, Waste & Environmental Engineering

One Year Full Time / Two Years Part Time

Introduction

This programme prepares graduates to work in the broad field of environmental protection and management. You will gain advanced theoretical and conceptual knowledge and understanding in the area of environmental engineering on topics such as environmental modelling, water and wastewater treatment, solid waste management, and environmental data analysis, amongst others. Environmental engineering involves the application of engineering and scientific principles to solve or prevent environmental problems. This programme allows you to gain competencies in the design of facilities to treat water, wastewater and wastes; in the development and protection of water resources; in the design of flood protection systems; in the analysis of environmental data; and in the design of infrastructure that respects the principles of environmental sustainability.

Course Highlight

The UCD School of Civil Engineering has made major investments in recent years to modernise and improve its research capability across a range of sub-disciplines and to establish facilities for world class research. Facilities include laboratories for structural testing, concrete, soils, road materials, hydraulics, water and effluent analysis, PC and workstation facilities and an engineering workshop.

Course Content and Structure

- 90 credits taught master's
- 60 credits taught modules
- 30 credits dissertation

Modules include:

- Advanced Air Pollution
- Environmental Impact Assessment
- Environmental Research Project
- Freshwater Resources Assessment
- Remote Sensing and GIS
- Hydraulic Engineering Design
- Waste Management
- Introduction to Water Resources Engineering
- Quantitative Methods for Engineers
- Life Cycle Assessment
- Water Waste and Environmental Modelling
- Research Skills for Engineers
- Environmental Engineering
- Water & Wastewater Treatment Processes
- Civil Engineering Systems
- Sustainable and Nature Based Water Infrastructure
- Geographical Information Systems for Policy and Planning

Why study at UCD?

Graduate education

12,800 graduate students; 17% graduate research students; structured PhDs

Global community

Over 11,000 international students from more than 152 countries

Global profile

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

Global careers

Dedicated careers support; 2-year stayback visa to work in Ireland

Career Opportunities

Graduates from the programme will find employment as engineers in the private sector (e.g., engineering consultancy, engineering design, project management, risk assessment, waste management), in the public sector (e.g., environmental protection, regulation, standards development, local government, river basin management), and in the non-governmental sector (e.g., environmental advocacies, NGOs), or may wish to pursue further qualifications (e.g., PhD, MBA) to become even more specialised. Employers of environmental engineers include commercial firms, engineering consultancies, government agencies, and nongovernmental organisations, all well known in Ireland and many with global operations

Graduate Profile

Sarah Nolan
Ryan Hanley Consultants

Having always had a passion for the environment, specifically water sciences, I knew the MEngSc degree at UCD was the perfect course to further develop my knowledge and equip me with the skills to succeed in my career. Having worked for many years following graduating from my undergraduate degree, I took the time to carefully choose the best master's that would help me reach my goal of working in the water industry. The Water, Waste and Environmental Engineering master's degree at UCD is a challenging and thoroughly rewarding course, which covers a variety of subject matters taught through lectures, tutorials, and labs. Gaining an engineering context to my previous scientific studies has significantly enhanced my knowledge and understanding of water sciences.

Applicant Profile

- An honours undergraduate degree (NFQ level 8) with a minimum 2:1 award or international equivalence in civil engineering, other related engineering (such as chemical engineering, environmental engineering, agricultural engineering), physical science or environmental related degree 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-Master's Pathway. Full details www.ucd.ie/alc/programmes/pathways/

International Fees and Scholarships

Tuition fee information is available on www.ucd.ie/fees. Please note that UCD offers a number of graduate scholarships for full-time, self-funding international students, holding an offer of a place on a UCD master's programme. Please see www.ucd.ie/global/scholarships/ for further information.

Related Master's Programmes of Interest

- ME Civil, Structural & Environmental Engineering
- MEngSc Structural Engineering

CONTACT US

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