

UNIVERSITY COLLEGE DUBLIN

COLLEGE OF ENGINEERING AND ARCHITECTURE

UCD SCHOOL OF CIVIL, STRUCTURAL AND ENVIRONMENTAL ENGINEERING

MASTER OF ENGINEERING (CIVIL AND ENVIRONMENTAL ENGINEERING) DEGREE PROGRAMME MTEMP006, T283

Duration: 2 Years (120 Credits)

Schedule: Full-Time

Commencing: Monday, 10 September 2012

Programme Co-ordinator & Contact Details:

Dr William L. Magette UCD School of Civil, Structural and Environmental Engineering Newstead G-76 University College Dublin Belfield Dublin 4 Ireland

Application Details: Applications for this programme are through Online Applications www.ucd.ie/apply

Entry Requirements: Candidates holding a Bachelor of Science Degree (180 ECTS) in Engineering (with a minimum of 2H2 honours level) or an equivalent engineering qualification will be considered.

Closing Dates: 15 March 2012 (Round 1 Offers) and 15 July 2012 (Round 2 Offers)

Candidates from outside the European Union are encouraged to apply by 15 March 2012, to allow sufficient time for processing of visa applications. More information on the latter point is available at: http://www.citizensinformation.ie/en/travel_and_recreation/travel_to_ireland/student_visas.html

Tuition Fees: \pounds 6,120.00 (EU students) per annum, \pounds 11,400.00 (Non-EU) per annum (2012-13 figures). For up-to-date information, see http://www.ucd.ie/registry/adminservices/fees/index.html

OVERVIEW

This is the first taught masters programme in Civil and Environmental Engineering in Ireland to be designed for compatibility with Europe's Bologna-style, two-cycle system of university education. This degree programme also provides a suitable pathway to meet Engineers Ireland's educational standard for the title of Chartered Engineer. 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, NGO's), or may wish to pursue further qualifications (*e.g.*, PhD, MBA) to become even more specialised. Graduates will be equipped with the skills that allow them to be "lifelong learners", whether in the pursuit of knowledge for personal use or in connection with their engineering careers.

COURSE CONTENT

The ME (Civil and Environmental Engineering) programme involves lectures, tutorials, assignments, laboratory work, an optional professional placement and a major research project. Students in this programme will gain advanced theoretical and conceptual knowledge and understanding in the area of environmental engineering on topics such as engineering hydrology, environmental modelling, water and wastewater treatment and solid waste management, and environmental data analysis among others. The research project, undertaken over both semesters in Year 2, includes planning and undertaking independent research, writing a major thesis that describes what was done and what was discovered, and defending the research in an oral examination.

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MODULES

Please note that further details on course structure and module descriptors may be obtained at http://www.ucd.ie/programmes/T283

Module Code	Module Title	Core/Option	Core Credits	Option Credits	Semester
Year 1					
CVEN40160	Systems and Geotechnics	(C)	5		1
CVEN40170	Civil Engineering Design	(C)	10		1
CVEN40180	Highway and Water Engineering	(C)	5		1
CVEN40500	Engineering Design Project	(C)	10		2
CVEN40390	Innovation Leadership	(0)		5	1
BSEN30240	Waste management	(0)		5	1
AESC40080	EIS & Strategic Environmental Assessment	(0)		5	1
PEP40100	Geographical Information Systems	(0)		5	1
CVEN40440	Professional Work Experience (June to August)	(0)		5	2
CVEN40070	Unit Treatment Process in Water Engineering	(0)		5	2
CVEN40080	Hydraulic Engineering Design	(0)		5	2
CVEN40580	Integrated Municipal Solid Waste Management	(0)		5	2
CVEN40570	Water Waste & Environmental Modelling	(0)		5	2
CVEN40560	Engineering Hydrology	(0)		5	2
Year 2					
CVEN40540	Engineering Research Project	(C)	25		1 & 2
STAT40690	Quantitative Methods for Engineers	(C)	5		1
MEEN40430	Professional Engineering (Management)	(C)	5		2
ENVB40040	EIA (Biology & Environmental Science)	(0)		5	1
CVEN40330	Construction Management	(0)		5	1
MEEN40050	Advanced Continuum Mechanics I	(0)		5	1
BSEN40110	Advanced Air Pollution	(O)		5	2
STAT40510	Applied Statistical Modelling	(0)		5	2

Please note the Modules listed above are indicative only and that final selection of modules is subject to consultation with and prior approval by the Programme Co-ordinator.

TEACHING AND ASSESSMENT

Teaching

Teaching is by means of lectures, supervised laboratories, tutorials, assignments and self directed learning. The research project in Stage 2 is undertaken individually and supervised by a member of academic staff.

Assessment

Assessment is by means of continuous assessment of assignments, laboratory and project work, and there will be substantial written examination of course material in most modules. The Engineering Research Project (CVEN40540)

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module will require submission of a substantial final report / thesis. Assessment of this module will involve participation in seminar / poster presentations and a final oral examination.

Timetable / Hours

The programme is modular and semesterised with full-time hours. There are two teaching semesters, *i.e.* Semester 1 (Autumn) and Semester 2 (Spring). Details of the official University calendar for 2012/2013 are as follows:

Semester 1

Teaching term 1 Monday, 10 September 2012 – Friday, 30 November 20121 (12 weeks) Revision Saturday, 1 December 2012 – Friday, 7 December 2012 (1 week) Exams Monday, 10 December 2012 – Friday, 21 December 2012 (11 working days)

Semester 2

Teaching term 2a: Monday, 21 January 2013 – Friday, 8 March 2013 (7 weeks) Fieldwork/Study period Monday, 11 March 2013 – Sunday, 24 March2 2013 (2 weeks) Teaching term 2b Monday, 25 March 2013 – Friday, 26 April3 2013 (5 weeks) Revision Monday, 29 April 2013 – Sunday, 5 May 2013 (1 week) Exams Tuesday, 7 May4 2013 – Saturday, 18 May 2013 (11 working days)

Summer term/Research period

Term Monday, 20 May – Sunday, 8 September6 16 weeks Graduate exam process5 (final dates to be confirmed)

1 October Bank Holiday: Monday, 29 October 2012

2 St Patrick's Day, Sunday, 17 March 2013

3 Good Friday, 29 March 2013; Easter Sunday, 31 March 2013; Easter Monday, 1 April 2013

4 May Bank Holiday: Monday, 6 May 2013

5 June Bank Holiday: Monday, 3 June, 2013; August Bank Holiday: 5 August 2013

AWARD

Graduates are eligible for the award of Master of Engineering (ME) in Civil and Environmental Engineering from University College Dublin.

CAREER OPPORTUNITIES

Graduates can expect to pursue careers in environmental engineering, in Ireland or abroad, and to be equipped with the skill set and knowledge that is vital for crucial roles in commercial enterprises, engineering consultancies, government, and non-governmental organisations.

Employers of environmental engineers include such companies / organisations as: RPS Group; Atkins; Nicholas O'Dywer; White Young Green; Mazars; Grant Thornton; Environmental Protection Agency; Department of the Environment, Community and Local Government; Local Authorities; Engineers Without Borders; among others.

Graduates will be able to apply their knowledge, understanding, and problem-solving abilities in new or unfamiliar environments; have the ability to integrate knowledge and handle complexity; and be able to formulate judgments with incomplete or limited information. Graduates will also be able to reflect on wider disciplinary, scientific, professional issues and social and ethical responsibilities linked to the application of their knowledge and judgments as engineers.

FURTHER INFORMATION

For further information in relation to this programme, please contact Dr William Magette (T: 01-7163214, william.magette@ucd.ie)