

# UNIVERSITY COLLEGE DUBLIN

# **COLLEGE OF ENGINEERING AND ARCHITECTURE**

# UCD SCHOOL OF MECHANICAL AND MATERIALS ENGINEERING and the UCD SCHOOL OF BUSINESS

# MASTER OF ENGINEERING (Engineering with Business) DEGREE PROGRAMME MTEMP006, T166

**Duration:** 2 Years

**Schedule:** Full-Time

**Commencing:** Monday, 10 September 2012

# **Programme Co-ordinator & Contact Details:**

Dr Eamonn Ambrose School of Mechanical and Materials Engineering University College Dublin Belfield Dublin 4 Ireland

Email address: <a href="mailto:eamonn.ambrose@ucd.ie">eamonn.ambrose@ucd.ie</a>

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

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

Please note that applicants will be required to attend an interview in support of their application.

Closing Dates: 15 July 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, in order to leave sufficient time for processing of visa applications. More information on the latter point is available at: <a href="http://www.citizensinformation.ie/en/travel">http://www.citizensinformation.ie/en/travel</a> and recreation/travel to ireland/student visas.html

**Tuition Fees:** €6,120.00 (EU students) per annum, €11,400.00 (Non-EU students) per annum (2011-2012 figures). For up-to-date information, please see: http://www.ucd.ie/registry/adminservices/fees/index.html

### **OVERVIEW**

The ME in Engineering with Business offers a unique opportunity to deepen the knowledge of engineering students in the business and management areas and is open to engineering students of all disciplines. Increasingly the skills set and problem solving skills of engineers are required in today's corporate world. This programme utilises the existing strengths and resources of the engineering schools within UCD and the UCD Graduate School of Business. The ME Major in Engineering with Business allows graduates to continue to deepen their engineering education within a given discipline such as Civil, Mechanical, Electrical engineering etc., while also gaining grounding in business and management subjects. Students will learn to apply their knowledge and understanding of engineering in an industrial and public service business context, through the use of case studies and a research based master's thesis. In addition to the application of engineering principles, new subjects will be introduced encompassing topics such as entrepreneurship, marketing, organisational behaviour and strategy. Students will apply both engineering and business knowledge in the design, implementation and management of complex engineering systems, developing their judgment both in the analysis of problems and in the implementation of solutions.

# **COURSE CONTENT**

The course is open to engineers from all disciplines, and the content is tailored to meet the needs of each student. The structure is as follows:

#### **30 Credits Engineering:**

Technical modules from within your chosen discipline: civil, electrical, electronic or mechanical modules taken from the range of current ME programmes. Within each discipline we have identified 4 core modules in the field which must be taken, along with 2 optional modules.

# 50 Credits Business and Technology Management:

Core modules covering entrepreneurship, marketing, operations management, business information systems, organisational behaviour, accounting and finance and economics. Options include project management, decision analysis and design and innovation.

# 40 credits Live Learning:

A six month work placement where student's technical and business knowledge can be applied and developed in a dynamic real-world setting. These placements are designed to expose students to all aspects of a technology business, while allowing them to develop their personal and personal and professional skills. The placement is followed by a four month masters research project, including research methods training. There is the potential for the project to be a follow-on to the work placement, allowing an ongoing in-depth study of the industry and the organisation.

# **MODULES**

The Modules listed below are from the 2011/2012 academic term and are indicative only. For a full list of currently available modules, refer to http://www.ucd.ie/programmes/T166.

UCD Code	Module Title	Core / Option	Core Credits	Option Credits	Semester
Year One					
BMGT43570	Management and Organisational Behaviour	(C)	7.5		1
MEEN30140	Professional Engineering (Finance)	(O)		5	1
MEEN40250	Design and Innovation (MEM)	(O)		5	1
	Technical Module 7	(O)		5	1
	Technical Module 1	(O)		5	1
	Technical Module 2	(O)		5	1
	Technical Module 3	(O)		5	1
	Technical Module 4	(O)		5	1
MEEN40520	Operations Management	(C)	5		2
MEEN40430	Professional Engineering (Management)	(C)	5		2
BMGT30090	Entrepreneurial Management	(C)	5		2
MEEN40360	Decision Analysis (MEM)	(O)		5	2
MEEN40310	Project Management (MEM)	(O)		5	2
	Technical Module 5			5	2
	Technical Module 6			5	2
Year Two					
MEEN40680	Professional Work Placement (SemY)	(C)	22.5		2
MEEN40560	Research Skills and Techniques	(C)	5		1
MIS40760	Business Information Systems Mgt (MiM)	(C)	7.5		2
MEEN40580	Engineering / Business Thesis	(C)	15		2
MKT40560	Marketing Management (MiM)	(C)	7.5		2

Please note that final selection of modules is subject to consultation with and prior approval by the Programme Coordinator.

# TEACHING AND ASSESSMENT

### **Teaching**

Teaching is generally based around 24 hours of lectures in a 12 week semester. Some modules involve online work with intensive seminar sessions. Learning on the course involves both individual and team-based assignments combining lectures, casework and projects. A significant amount of the learning on this programme takes place during the 6-month work placement and the research project, both of which enable students to translate the concepts from the lecture theatre into the business environment.

#### Assessment

Assessment methods include exams, case assignments, presentations, individual reports and group activities.

# 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 2012 (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 Masters of Engineering (ME) in Engineering with Business from University College Dublin.

# **CAREER OPPORTUNITIES**

The ME (Engineering with Business) is designed to produce fully qualified and certified engineers who have a particular interest in and understanding of the business context within which engineers usually operate. It was conceived to address the perceived lack of "industry-ready" engineers coming out of third level education. Career opportunities are very broad as the ME positions students not as a narrow technical specialist but as a "T-shaped" individual combining specialist skills with a broad understanding of the business environment. In addition to careers within their technical specialisms, ME (Engineering with Business) graduates can consider careers in management consulting, the financial sector and IT.

# **FURTHER INFORMATION**

For further information in relation to this programme, please contact:
Dr Eamonn Ambrose
School of Mechanical and Materials Engineering
University College Dublin
Belfield
Dublin 4
Ireland

Email address: eamonn.ambrose@ucd.ie