

<b>Module Code</b>	MEU11E08
<b>Module Name</b>	Introduction to Professional Engineering
<b>ECTS Weighting<sup>2</sup></b>	5 ECTS
<b>Semester taught</b>	Semester 1
<b>Module Coordinator/s</b>	Professor David Taylor ( <a href="mailto:dtaylor@tcd.ie">dtaylor@tcd.ie</a> ) Professor Brian Broderick ( <a href="mailto:bbrodrck@tcd.ie">bbrodrck@tcd.ie</a> ) Professor Khurshid Ahmad ( <a href="mailto:khurshid.ahmad@scss.tcd.ie">khurshid.ahmad@scss.tcd.ie</a> ) Assistant Prof. Enda Bates ( <a href="mailto:ebates@tcd.ie">ebates@tcd.ie</a> )
<b><u>Module Learning Outcomes</u> with reference to the <u>Graduate Attributes</u> and how they are developed in discipline</b>	<p>Learning outcomes</p> <p>Upon completion of this module, students will be able to:</p> <p>LO1. Understand the wider role of the professional engineer in society;</p> <p>LO2. Learn to articulate the ethical, economic, social, regulatory and political issues that also arise in the context of a technical project;</p> <p>LO3. Organise a team project by defining team roles and planning a set of tasks and actions;</p> <p>LO4. Manage a team project by checking progress and monitoring results;</p> <p>LO5. Self-structure a work programme around a set of open ended questions;</p> <p>LO6. Apply structured design processes to achieve design outcomes</p> <p>LO7. Provide evidence for ideas, concepts and suggestions;</p> <p>LO8. Write a well structured detailed report and make an oral presentation.</p> <p><b>Graduate Attributes: levels of attainment</b></p> <p>To act responsibly - Introduced</p> <p>To think independently - Introduced</p> <p>To develop continuously - Introduced</p> <p>To communicate effectively - <b>Introduced</b></p>

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<sup>1</sup> [An Introduction to Module Design](#) from AISHE provides a great deal of information on designing and re-designing modules.

<sup>2</sup> [TEP Glossary](#)

## Module Content

The module involves 24 lectures, 6 each from: Civil, Structural and Environmental Engineering; Mechanical and Manufacturing Engineering; Computer Science and; Electronic and Electrical Engineering over the first six weeks. This is followed by 20 hours of structured tutorials focused on project work.

- Introduction to engineering
- Environmental issues in engineering
- Engineering ethics
- Engineering forensics
- Physical and cyber sustainability
- Group interaction and team collaboration
- Design processes and outcomes
- Survey design and trend identification
- Report writing

## Teaching and Learning Methods

This module is taught using traditional lectures for the first six weeks. In the last five weeks, students work in groups to self-structure their agendas and workloads with appropriate supervision from lecturers and demonstrators in tutorial sessions.

<b>Assessment Details<sup>3</sup></b> Please include the following:	Assessment Component	Assessment Description	LO Addressed	% of total	Week due			
<ul style="list-style-type: none"> <li>• <b>Assessment Component</b></li> <li>• <b>Assessment description</b></li> <li>• <b>Learning Outcome(s) addressed</b></li> <li>• <b>% of total</b></li> <li>• <b>Assessment due date</b></li> </ul>	Oral presentation	Oral presentation of the group project.	2,8	20	Week 11			
	Written report	Written report of the group project.	1,2,3,4,5,6,7,8	80	Week 12			
<b>Reassessment Requirements</b>								
<b>Contact Hours and Indicative Student Workload<sup>3</sup></b>	<table border="1"> <tr> <td><b>Contact hours: 44</b></td> </tr> <tr> <td><b>Independent Study (preparation for course and review of materials): 20</b></td> </tr> <tr> <td><b>Independent Study (preparation for assessment, incl. completion of assessment): 40</b></td> </tr> </table>					<b>Contact hours: 44</b>	<b>Independent Study (preparation for course and review of materials): 20</b>	<b>Independent Study (preparation for assessment, incl. completion of assessment): 40</b>
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<b>Recommended Reading List</b>								
<b>Module Pre-requisite</b>	None							
<b>Module Co-requisite</b>	Not applicable							
<b>Module Website</b>	<a href="https://www.tcd.ie/Engineering/undergraduate/baiyear1/modules/1E8.pdf">https://www.tcd.ie/Engineering/undergraduate/baiyear1/modules/1E8.pdf</a>							
<b>Are other Schools/Departments involved in the delivery of this module? If yes, please provide details.</b>	Yes, Computer Science							
<b>Module Approval Date</b>								
<b>Approved by</b>								
<b>Academic Start Year</b>	September 9 <sup>th</sup> 2019							
<b>Academic Year of Date</b>	2019/2020							

<sup>3</sup> [TEP Guidelines on Workload and Assessment](#)

