<table>
<thead>
<tr>
<th><strong>Module Code</strong></th>
<th>MEU11E08</th>
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</thead>
<tbody>
<tr>
<td><strong>Module Name</strong></td>
<td>Introduction to Professional Engineering</td>
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<tr>
<td><strong>ECTS Weighting</strong></td>
<td>5 ECTS</td>
</tr>
<tr>
<td><strong>Semester taught</strong></td>
<td>Semester 1</td>
</tr>
<tr>
<td><strong>Module Coordinator/s</strong></td>
<td>Professor David Taylor (<a href="mailto:dtaylor@tcd.ie">dtaylor@tcd.ie</a>)</td>
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<tr>
<td></td>
<td>Professor Brian Broderick (<a href="mailto:bbrodrck@tcd.ie">bbrodrck@tcd.ie</a>)</td>
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<td>Professor Khurshid Ahmad (<a href="mailto:khurshid.ahmad@scss.tcd.ie">khurshid.ahmad@scss.tcd.ie</a>)</td>
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<td>Assistant Prof. Enda Bates (<a href="mailto:ebates@tcd.ie">ebates@tcd.ie</a>)</td>
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**Module Learning Outcomes** with reference to the **Graduate Attributes** and how they are developed in discipline

Learning outcomes

Upon completion of this module, students will be able to:

- **LO1.** Understand the wider role of the professional engineer in society;
- **LO2.** Learn to articulate the ethical, economic, social, regulatory and political issues that also arise in the context of a technical project;
- **LO3.** Organise a team project by defining team roles and planning a set of tasks and actions;
- **LO4.** Manage a team project by checking progress and monitoring results;
- **LO5.** Self-structure a work programme around a set of open ended questions;
- **LO6.** Apply structured design processes to achieve design outcomes;
- **LO7.** Provide evidence for ideas, concepts and suggestions;
- **LO8.** Write a well structured detailed report and make an oral presentation.

**Graduate Attributes: levels of attainment**

To act responsibly - Introduced
To think independently - Introduced
To develop continuously - Introduced
To communicate effectively - **Introduced**
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

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.
### Assessment Details

**Please include the following:**

- Assessment Component
- Assessment description
- Learning Outcome(s) addressed
- % of total
- Assessment due date

<table>
<thead>
<tr>
<th>Assessment Component</th>
<th>Assessment Description</th>
<th>LO Addressed</th>
<th>% of total</th>
<th>Week due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral presentation</td>
<td>Oral presentation of the group project.</td>
<td>2,8</td>
<td>20</td>
<td>Week 11</td>
</tr>
<tr>
<td>Written report</td>
<td>Written report of the group project.</td>
<td>1,2,3,4,5,6,7,8</td>
<td>80</td>
<td>Week 12</td>
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### Reassessment Requirements

**Contact Hours and Indicative Student Workload**

- **Contact hours:** 44
- **Independent Study (preparation for course and review of materials):** 20
- **Independent Study (preparation for assessment, incl. completion of assessment):** 40

### Recommended Reading List

- **Module Pre-requisite:** None
- **Module Co-requisite:** Not applicable

**Module Website**

- [https://www.tcd.ie/Engineering/undergraduate/baiyear1/modules/1E8.pdf](https://www.tcd.ie/Engineering/undergraduate/baiyear1/modules/1E8.pdf)

**Are other Schools/Departments involved in the delivery of this module? If yes, please provide details.**

- Yes, Computer Science

### Module Approval Date

- **Approved by:**
- **Academic Start Year:** September 9th, 2019
- **Academic Year of Date:** 2019/2020