

<b>Module Code</b>	CEU44E04
<b>Module Name</b>	4E4 TRINITY INDUSTRY PARTNERSHIP PROJECT (CIVIL)
<b>ECTS Weighting</b>	30 ECTS - Derogation
<b>Semester taught</b>	Semester 2
<b>Module Coordinator/s</b>	Muhammad Ali
<b><a href="#">Module Learning Outcomes</a> with reference to the <a href="#">Graduate Attributes</a> and how they are developed in discipline</b>	<p>On successful completion of this module, students should be able to:</p> <p>The learning outcomes for the EPI module are focussed on the implementation of technical knowledge to address engineering problems, communications, group work, professional and social ethics, sustainability, risk assessment and engineering design practice. The project work undertaken as part of the EPI is diverse. As a result, the Learning Agreement/Outcomes will vary, but on completion of the module, students will have achieved several learning outcomes from the following list:</p> <p>LO1. Be able to identify and use appropriate mathematical methods, numerical techniques and software tools for application to new and ill-defined engineering problems;</p> <p>LO2. Be able to integrate knowledge, handle complexity and formulate judgements with incomplete or limited information;</p> <p>LO3. Have the ability to redesign products, processes or systems in order to improve productivity, quality, safety and other desired needs;</p> <p>LO4. Have the ability to apply design methods, processes and techniques to unfamiliar, ill-defined problems, involving other disciplines;</p> <p>LO5. Be able to design according to codes of practice and industry standards; to identify limitations of codes of practice and the need for their application;</p> <p>LO6. Have the ability to investigate and define a need and identify constraints including health, safety and legal issues and the impact of engineering solutions in a societal and environmental context;</p> <p>LO7. Be able to make engineering judgements that take cognisance of the social, environmental, ethical, economic, financial, institutional and commercial considerations affecting the exercise of their engineering discipline;</p> <p>LO8. Have the ability to consult and work with experts in various fields in the realisation of a product or system;</p> <p>LO9. Have knowledge and understanding of concepts from a range of areas outside engineering;</p> <p>LO10. Be able, via knowledge and understanding of group dynamics, to exercise leadership;</p> <p>LO11. Be able to select and apply appropriate communication tools and write technical papers and reports;</p>

LO12. Be able to describe succinctly, the relevant advantages and disadvantages of various technologies to a lay audience, and to communicate effectively in public.

#### **Graduate Attributes: levels of attainment**

To act responsibly - Attained

To think independently - Attained

To develop continuously - Attained

To communicate effectively - Attained

### **Module Content**

The Engineering Project Internship (EPI) module is a practical internship in a professional engineering setting. This setting can be a company, a government institution, research centre, clinic, etc as deemed appropriate. The School of Engineering has selected hosts for the EPI which are already in collaboration with School of Engineering academics, or are forming new relationships of mutual benefit.

#### **Purpose**

The EPI gives the student the opportunity to translate engineering theory into practice in a professional engineering environment. A central requirement of the EPI is that it must be based around significant engineering research work. The EPI is principally assessed on the basis of defined engineering work. The technical activity should be related to both the student's engineering studies and to the host's activities, and it should constitute a significant body of engineering work at the appropriate level. It should involve tasks and methods that are more appropriately completed in a professional engineering environment and should, where possible, make use of human and technology resources provided by the host. It consolidates the student's prior learning and provides a context for later research studies. The student remains a full time registered student at Trinity College Dublin during the EPI and this activity is therefore wholly distinct from any industrial interactions which may occur over vacation periods.

#### **Module organisation**

The EPI module ordinarily runs from Mid January to Mid June. The EPI accounts for half of the student effort in the fourth-year of their five-year MAI<sup>1</sup> studies. Students who take the EPI cannot take any other modules in the second

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<sup>1</sup> Integrated five year Masters programme in Engineering at Trinity College Dublin.

semester of their fourth year.

### **Implications**

Participation in the EPI can limit MAI module choices for the fifth-year, due to the prerequisite requirements for some modules. Accordingly, it will be necessary to ensure that MAI students who go on Internship in their fourth year will be able to avail of a suitable menu of modules in their fifth-year. It will be allowable in some circumstances for fifth-year students to take up to 10 ECTS of appropriate fourth-year modules. These modules must be chosen to strengthen their chosen area of specialism and, where possible, also support their fifth-year project work. The choice of modules for the fifth-year for all students going on the EPI must be made with the agreement of the Year/Stream Coordinator(s), and the Head of Discipline.

### **Teaching and Learning Methods**

e.g., lectures, seminars, online learning via VLE, field trips, laboratories, practice-based etc...

<b>Assessment Details<sup>2</sup></b> <b>Please include the following:</b> <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>	Assessment Component	Assessment Description	LO Addressed	% of total	Week due
		Goals Report	LO1-12	10%	TBD
		Reflective Diary	LO1-12	5%	TBD
		Midway Report	LO1-12	10%	TBD
		Midway Presentation	LO1-12	5%	TBD
		New Skills Report	LO1-12	10%	TBD
		Research Report	LO1-12	50%	TBD
		Poster Presentation	LO1-12	5%	TBD
		Exit Interview - viva	LO1-12	5%	TBD

**Reassessment Requirements**

**Contact Hours and Indicative Student Workload<sup>2</sup>**

<b>Contact hours:</b>
<b>Independent Study (preparation for course and review of materials):</b>
<b>Independent Study (preparation for assessment, incl. completion of assessment):</b>

**Recommended Reading List**

**Module Pre-requisite**

A minimum II.1 grade (Second Class Honors, First Division, 60 – 69%) must be obtained in the Junior Sophister **annual examinations** to be eligible for participation in this module.

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<b>Module Co-requisite</b>	None
<b>Module Website</b>	<a href="https://www.tcd.ie/civileng/programmes/undergraduate/ss-industrial-placement/">https://www.tcd.ie/civileng/programmes/undergraduate/ss-industrial-placement/</a>
<b>Are other Schools/Departments involved in the delivery of this module? If yes, please provide details.</b>	None
<b>Module Approval Date</b>	
<b>Approved by</b>	
<b>Academic Start Year</b>	January 2025
<b>Academic Year of Date</b>	2024-25