Module Code	EE5E2
Module Name	Research Methods
ECTS Weighting[2]	5 ECTS
Semester taught	Semester 1
Module Coordinator/s	Timothy Savage & Enda Bates
Module Learning Outcomes with reference to the Graduate Attributes and how they are developed in discipline	On successful completion of this module, students should be able to: LO1. Communicate effectively in technical and scientific writing, and present scientific/technical ideas concisely to a technical audience that ma not be expert in the specific domain of the project; LO2. Manage workflow and task scheduling within the constraints of the resources available to meet specific design goals and deadlines; LO3. Undertake a project involving independent enquiry and investigation of a practical engineering problem, application or topic; LO4. Examine and discuss the impact of the project on society, giving consideration to ethical norms and standards. **Graduate Attributes: levels of attainment** To act responsibly - Attained To think independently - Attained To develop continuously - Attained To communicate effectively - Attained
Module Content	*Please provide a brief overview of the module of no more than 350 words written so that someone outside of your discipline will understand it.* Engineering research is an essential component of industry driving the development of new products and processes. In an academic context engineering research can lead to technologies with significant societal benefits. The aim of this module is to provide exposure to the concepts ar processes of research in engineering to prepare students for conducting their first engineering research project. To achieve these aims the module content will include: • Project Planning

[1] An Introduction to Module Design from AISHE provides a great deal of information on designing and re-designing modules.
[2] TEP Glossary

	• Planning a Project Report • Communication and Presenting • Professional Writing • Scientific Document Creation • Presenting Results • Coding/Batch jobs • Ethics and Security • Gender • R&D Experiences
Teaching and Learning Methods	The teaching and learning methods include lectures, workshops and a ran of online activities facilitated through the VLE module container. There wi be a focus on authentic activities relevant to the student's own areas of interest and collaborative learning.

Assessment Details[3] **Please include the following:** • **Assessment Component** • **Assessment description** • **Learning Outcome(s) addressed** • **% of total** • **Assessment due date**	Assessment Component	Assessment Description	LO Addressed	% of total	We due
	MCQ Exam	MCQ exam delivered via Blackboard.	1,2,4	40	TBD
	Research Ethics Essay	Essay outlining ethical considerations, and approval applications, for a given research project scenario	1,2,3,4	60	TBD

Reassessment Requirements	Resubmission of failed course work.
Contact Hours and Indicative Student Workload[3]	**Contact hours:** 20 hours **Independent Study (preparation for course and review of materials):** 40 hours **Independent Study (preparation for assessment, incl. completion of assessment):** **40 hours**
Recommended Reading List	“How to write a thesis" by Umberto Eco
Module Pre-requisite	None
Module Co-requisite	None
Module Website	
Are other Schools/Departments involved in the delivery of this module? If yes, please provide details.	
Module Approval Date	
Approved by	
Academic Start Year	12th September 2022
Academic Year of Date	Academic Year 2022-2023

[3] TEP Guidelines on Workload and Assessment