Module Code	**MEU44EM9**
Module Name	**User Centred Design Innovation**
ECTS Weighting[1]	5 ECTS
Semester taught	Semester 1
Module Coordinator/s	Assistant Professor Kevin Kelly (kevin.kelly@tcd.ie)
[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: 1. Work in in multidisciplinary teams on ambitious, ill-defined and challenging projects 2. Identify key users and stakeholders 3. Identify user needs through a variety of anthropological and ethnographic techniques 4. Conduct patent searches and analyse prior intellectual property 5. Liaise with professional engineers (and other staff in the commercial sector) in a professional and timely manner 6. Assess and synthesise state of the art thought in the broad field of user-centred design. **Graduate Attributes: levels of attainment** To act responsibly - Attained To think independently - Attained To develop continuously - Attained To communicate effectively - <mark>Attained</mark>
Module Content	**Aims/Objectives** Engineers and technologists are typically well equipped with fundamental knowledge to develop new products and services. Additionally, they will have experience of the practice of designing new devices, components, systems and programs. However, research shows that most new businesses fail because they fail to clearly identify a user need and to meet that need. This module provides students with the tools to identify users and their needs through a structured approach drawing from the design, ethnography and psychological domains, progressing to rapid prototyping of design concepts for testing with users. Students will work individually and in teams on understanding users and stakeholders in complex multidisciplinary challenges and learning how to bring formulate tractable technical solutions for identified users and needs.

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[1] [TEP Glossary](#)

	Syllabus
	- Introduction to user centred design
	- Ideation and the use of personas and POV statements
	- Needfinding and benchmarking
	- Thought leaders in user-centred design
	- Interviewing and observation tools and techniques
	- Use of focus groups
	- Intellectual Property and patenting
Teaching and Learning Methods	A blended learning approach is used in the module with extensive use made of a virtual learning environment. Structured tuition is delivered through a flipped learning model, where reading/resource material is provided in advance and discussion takes place in a classroom format. Students will work individually – mainly in the early part of the module, to develop core skills which are then applied in a group context in the remainder of the module. The majority of student learning will take place via independent (including group) work, mentored and guided through weekly meetings and interactions with the teaching team. Extensive use will be made of external experts and coaches/mentors (former graduates) in both formal and informal settings. *In the event of continuing issues with Covid-19, some or all of these interactions may move online.

Assessment Details[2] 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	Week due
	Assignments	Continuous Assessment	All	100%	
Reassessment Requirements	Re-assessment will take place through individual projects assigned during the summer period.				
Contact Hours and Indicative Student Workload[2]	**Contact hours: ~ 5 hours of structured teaching, 10 hours of presentations or in-class activities and 5 hours of group meetings**				
	Independent Study (preparation for course and review of materials): 10 hours				
	Independent Study (preparation for assessment, incl. completion of assessment): 80 hours				
Recommended Reading List	None				
Module Pre-requisite					
Module Co-requisite					
Module Website					
Are other Schools/Departments involved in the delivery of this module? If yes, please provide details.					
Module Approval Date	31/08/2023				
Approved by	Nicole Byrne				
Academic Start Year	2023				
Academic Year of Date	2023-2024				

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[2] TEP Guidelines on Workload and Assessment