**ME7B18 Design and Innovation** – [10 Credits]

**Coordinator:** Assistant Prof. Michael Monaghan ([monaghmi@tcd.ie](mailto:monaghmi@tcd.ie))

**Semester:** 2

**Module Organisation**
This module runs during semester 2 and comprises of seminars, lectures and project related work—shops.

**Module Description**
This module introduces students to tools and topics within the clinical engineering environment. This module will provide students with an introduction to working within multidisciplinary project teams and provide the opportunity to apply learned knowledge to real world problems within group project work to develop functional prototypes using rapid prototyping technology.

**Learning Outcomes**
On successful completion of this module, students should have developed:

1. an ability to create and interpret a brief and to make competent judgements and decisions at the design level.
2. an ability to perceive the nature of problems in depth, and to pursue innovative and creative solutions to design problems.
3. to communicate design and research concepts through multiple mediums both visually and orally to multi-disciplinary teams.
4. an understanding of the relevance of individual research in society and the potential impact on individuals, groups and society.
5. skills ranging from concept through realization to produce high quality functional product prototypes using 3D printing technologies.

**Module Content**
- Introduction to industrial design run by National College of Art & Design (NCAD) *(week beginning 26th February)*
- Group project involving the development of functional device prototypes using rapid prototyping technology; website design and demonstration of projects to the general public through local science fairs.

**Teaching Strategies**
The module is taught using a combination of seminars, lectures and project related work.
Assessment Modes

- NCAD Project (40% of final grade) - this takes place the week beginning 26th February 2018
- Group rapid prototyping project (60% of final grade)