



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

MSc in Mechanical Engineering

Department of
Mechanical, Manufacturing and
Biomedical Engineering



Programme Overview

The MSc in Mechanical Engineering aims to give you an education that will enable you to become a future leader in the fields of mechanical and manufacturing engineering. There are many exciting challenges facing industry and the world in general, such as managing our future energy needs and producing goods in a sustainable manner. Engineering is not just about crunching numbers; it is identifying how problems affect society and how society changes because of the solutions you provide. There has never been a greater need for highly qualified and innovative mechanical engineers to ensure the future of our society.

This Level 9 MSc course equips students with the required breadth and depth of skills to understand the technologies utilised in our societies. You will experience cutting edge research during your studies. The Department has over 20

professors who are leaders in their respective fields, active in research, providing advice to industry and running their own companies to promote innovations arising from their work. Some of our leading research areas are Manufacturing, Design, Fluids, Noise and Vibration, Heat Transfer, Materials, Robotics, Instrumentation and Biomedical Engineering. These research areas lead and inform the definition of the modules on the MSc programme.

The student group on this course is diverse, encompassing local and international participants, as well as a mix of full-time students alongside professionals undertaking part-time learning. Through the research project, it provides networking opportunities to connect with PhD researchers, as well as the research centres and industry partners.

www.tcd.ie/mecheng

Programme Content

The MSc in Mechanical Engineering is designed to provide a flexible route to a MSc qualification for students who have completed a Bachelor's degree. It addresses advanced topics over a wide range of Mechanical and Manufacturing Engineering subjects. Within the MSc, there are many module options to choose from and an excellent opportunity to engage in topical research with leading research groups within the School of Engineering, as an important part of this programme is a research project. Students are encouraged to propose their own project and develop a plan in conjunction with an academic supervisor from across the School of Engineering.

The whole course consists of 90 ECTS Credits, of which 40 ECTS are given for the research project & research methods and the remaining 50 ECTS for the taught modules. There are a variety of modules to choose from ranging from 5 to 15 ECTS each. You will be assisted in developing a targeted programme of study through your module selections.

Programme Delivery

Some taught modules feature hybrid delivery where in-person lectures are also live streamed and recorded on Trinity's online teaching platform. All course materials and assignment submissions are also online, and some modules feature class forums to encourage additional discussion between the class members. While in-person attendance is encouraged as the most beneficial learning and networking experience for students, the complete access to online teaching provides a high degree of flexibility for part-time learners to study parts of this course along side their full-time professional job. Project supervision meetings can also be held remotely. (Some physical attendance on the Trinity campus is required, e.g. to deliver seminar presentations or undertake experimental project work).

The structure facilitates highly flexible study options so that even employed professionals can engage. Students can choose part-time or full-time study and can undertake smaller elements of the programme to attain a Postgraduate Certificate (30 ECTS) or a Postgraduate Diploma (60 ECTS). Subsequently, students can choose to

continue their study to upgrade the Certificate to the Diploma, or upgrade the Diploma to the MSc. It is also possible to study some modules in isolation for Continuing Professional Development.

This MSc degree is fully accredited by Engineers Ireland to produce professional engineers capable of working in the fields of mechanical and manufacturing engineering.

Programme Requirements

This Postgraduate Certificate/Diploma/MSc is open to those with:

- Level 8 honours degree (180 ECTS) in a STEM, or cognate discipline
- A demonstrated aspiration to pursue a career in Mechanical Engineering
- 2-page Curriculum Vitae (CV)
- 1-page letter of motivation
- Two references

The programme aims to attract talented students and mobilise leaders to action within both the private and public sector, in Ireland and abroad, to deliver future technologies that will address the needs of society.

Application Details

<https://www.tcd.ie/mecheng/postgraduate/>

Contact Details

Course Director: Professor John Kennedy
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**RANKED
1st
IN
IRELAND**


**TOP
25
IN
EUROPE**


**TOP
100
WORLD
WIDE**

QS subject rankings, 2023

