

UCD has opened up so many opportunities for me, from meeting new people to developing many valuable skills to allow me to choose from a wide range of career paths. I decided to study Mechanical Engineering because it has a great balance between theory and practical problems as well as being a very flexible degree. From day one, you are challenged with the task of becoming a problem solver, critical thinker but with an important focus on being able to communicate and present ideas to others. There has always been a very clear connection between the work we do and real-world application, making it very satisfying.

-Aaron Gilmartin, Student



### Why is this course for me?

Mechanical engineers help improve our world. We face unprecedented challenges, from understanding climate change, to managing global mobility, to finding sustainable growth pathways for the burgeoning population in the developing world. Mechanical Engineering in UCD provides you with the education, skills and knowledge you will need to understand the challenges, and help to develop the new solutions we need. Working in areas ranging from energy to aerospace, biomedicine or manufacturing, mechanical engineers are changing our world for the better. They create new solutions, integrate disparate technologies, increase energy efficiency, reduce our consumption of natural resources and minimise our impact on the local and global environment. If you want to help forge a path to a brighter future, Mechanical Engineering at UCD is the place for you.

### What will I study?

#### First Year

Engineering students follow a common first year. Modules include: Calculus  
 • Chemistry  
 • Creativity in Design  
 • Electrical/Electronic Engineering  
 • Energy Engineering  
 • Engineering Computing  
 • Linear Algebra Mathematics  
 • Mechanics  
 • Physics

#### Second to Fifth Year

Sample modules for Mechanical Engineering students include: Advanced Metals Processing  
 • Mechanical Engineering Design  
 • Mechanics of Fluids  
 • Materials Science & Engineering  
 • Heat Transfer  
 • Electrical & Electronic Circuits  
 • Manufacturing Engineering  
 • Mechanics of Solids  
 • Professional Engineering  
 • Engineering Thermodynamics  
 • Applied Dynamics  
 • Biomechanics  
 • Measurement & Instrumentation  
 • Control Theory

A student's week includes attending lectures and tutorials, as well as participating in laboratory-based workshops, design projects and undertaking independent study.

A combination of end-of-trimester written examinations and continuous assessment is used. In your final year, you will also submit a report on your research project.

### Career & Graduate Study Opportunities

Opportunities are extraordinarily diverse, making graduates highly resilient to changing economic circumstances. Recent graduates are currently employed in:

- Energy, Biomedical, Aeronautical, Automotive and Manufacturing Sectors
- IT Companies
- Management and Project Management.

Graduates can pursue taught or research master's degrees in Mechanical Engineering, Materials Science and Engineering, Energy Systems Engineering, Engineering with Business or Biomedical Engineering in UCD. Those with a strong interest in research also have the opportunity to pursue a PhD.

### International Study Opportunities

Students have the opportunity in their third year to spend either one or two trimesters studying abroad in a partner University, there are options to study in countries such as Australia, Canada, China, France, Germany, New Zealand, Singapore, UK, USA.

### Professional Work Experience

Professional Work Experience (PWE) is incorporated in the ME programme. Six-to-eight-month internships (the majority of which are paid) have included the following employers: AbbVie, Accenture, Advanced Surgical Concepts, Ethos Engineering, Fingleton White, Glen Dimplex, Henkel, Hilti, Irish Distillers, Jacobs Engineering, Jaguar Land Rover and Nypro.

# MECHANICAL ENGINEERING

**BSc (Engineering Science) (NFQ Level 8) leading to ME (NFQ Level 9) or BE (Hons) (NFQ Level 8)**

## CAO CODE: DN150

**CAO Points Range 2020: 520-625**

Length of Course: **3 Years (BSc) (Hons) + 2 Years (ME) or 4 Years (BE)**

DN150 Places: **265**

### General Entry Requirements

See pages 195 - 203

### Leaving Cert Subject Entry Requirements

- H4 in Mathematics
- H6 in a laboratory science and
- O6/H7 in English, Irish and two other recognised subjects

### Other School Leaving Examinations

See [www.ucd.ie/admissions](http://www.ucd.ie/admissions)

### Level 5/6 QQI-FET

None

### Level 6/7 Progression Routes

Yes, see [www.ucd.ie/transfer](http://www.ucd.ie/transfer)

### Mature Entry Route

See [www.ucd.ie/maturestudents](http://www.ucd.ie/maturestudents)

### Special Entry Recommendations

It is recommended that the Laboratory Science subject should be one of Chemistry, Physics or Biology

### Other Courses of Interest:

Agricultural Systems Technology Engineering	160
Biomedical Engineering	182
Structural Engineering with Architecture	183
	188

[www.ucd.ie/myucd/eng](http://www.ucd.ie/myucd/eng)

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