

ENGINEERING  
OPEN EVENING

10th January 2023  
Register at  
[www.myUCD.ie](http://www.myUCD.ie)



UCD  
ENGINEERING

**UNDERGRADUATE  
COURSE ENTRY 2023**



## UCD ENGINEERING (DN150)

**BSc (Engineering Science) (NFO Level 8) or BE (Hons) (NFO Level 8) or Integrated Master of Engineering (NFO Level 9)**

### WHAT IS UCD ENGINEERING?

UCD DN150 Engineering is the entry point to all of the Engineering programmes at UCD. We have the widest range of degree choices in the country and, after completing the common first year, you can choose your second year pathway from one of the following:

- Biomedical Engineering
- Chemical & Bioprocess Engineering
- Civil Engineering
- Electrical or Electronic Engineering
- Mechanical Engineering
- Structural Engineering with Architecture

Your chosen area of specialisation in second year will also offer routes to further branches of engineering at Master's level in year 4 and 5.

### WHAT WILL I STUDY IN FIRST YEAR?

Your first year in UCD will see you immersed in a completely new life from both an educational and a social perspective. Educationally, the first year is a common year which allows you gain an understanding of the many engineering disciplines available before you commence your specialisation in second year.

Your first year will be spent intensively learning and discovering how to solve problems through Physics, Chemistry, Mathematics and Computing, as well as gaining exposure to engineering subjects such as Mechanics, Energy Engineering, Creativity in Design, and Electronic and Electrical Engineering.

UCD Engineering students also have the option to take elective modules throughout UCD on the Horizons programme.

### WHAT WILL MY TIMETABLE LOOK LIKE?

The number of hours spent in lectures, practical labs and tutorials each week varies, but you could expect to have approximately 24 contact hours per week in first year. You will have approximately 13 hours of lectures, 9 hours of labs and 2 hours of tutorials each week. You will also need to spend additional time working on coursework projects and assignments, both in teams and on your own.

#### Minimum CAO Points Required

2022 - 577 (Round 1)

2021 - 556 (Final Round)

#### Length of Course

3 Years (BSc)

4 Years (BE) (Hons)

5 Years (Integrated ME)

#### Leaving Cert Entry Requirements

- English (O6/H7)
- Irish (O6/H7)
- Mathematics (min H4)
- One laboratory science subject (min H6) Physics, Chemistry, Biology and Agricultural Science are accepted
- Two other recognised subjects (O6/H7)

#### Places Available

277 places available in first year through the CAO. Typical class sizes in second year for each specialisation:

- Biomedical: 33
- Chemical & Bioprocess: 38
- Civil: 24
- Electrical/Electronic: 53
- Mechanical: 99
- Structural Eng with Architecture: 11

#### HEAR/DARE Access Routes

Yes, see [www.ucd.ie/all/cometoucd/applying/heardare/](http://www.ucd.ie/all/cometoucd/applying/heardare/)

#### A-Level/GCSE

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

#### Level 5/6 QQI-FET Entry Route

None

#### Level 6/7 Progression Entry Route

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

#### Mature Entry Route

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

#### Open Learning Entry Route

None

## CAN I DO AN INTERNSHIP AS PART OF THE DEGREE?

The ME degrees in Engineering at UCD all incorporate a Professional Work Experience (PWE) internship module, designed to integrate students' academic and career interests with practical work experience for a period of 6-8 months. The College of Engineering & Architecture has two dedicated Internship Managers, who help prepare the students for their internship in conjunction with UCD Careers Network's Career & Skills Consultants. ME students completed internships with 100 different employers in the past academic year. Among those employers are: AbbVie, Accenture, AECOM, Arup, BD Medical, Boston Scientific, Energia, ESB, EY, Glanbia, Intel, Jacobs, Mainstream Renewable Power, Medtronic, Meinhardt (London), Mercury, Microsoft, Pfizer, PM Group, RPS, Stryker, Thornton Tomasetti (New York) and Lawrence Berkeley National Laboratory (California).

## WHAT ARE THE CAREER OPTIONS FOR ENGINEERING GRADUATES?

From running a company to designing an industrial plant, from working in a multinational like Google to visiting Africa to work on irrigation systems, the opportunities that will be available to you as a UCD engineering graduate are as wide as they are varied. Whether your career path is to make a million by the time you are 25 or help save the world, you won't go too far wrong with engineering! It is not only a profession, it is a discipline, which will equip you with a mindset and skill set that will make you an asset on every career path you decide to take, and to any company that employs you.

## WHAT ARE THE GRADUATE STUDY OPTIONS FOR AN ENGINEERING GRADUATE?

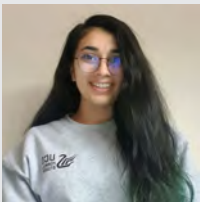
The options for UCD engineering graduates are numerous. In UCD there are taught Master's programmes including:

- Biomedical Engineering
- Biosystems & Food Engineering
- Chemical & Bioprocess Engineering
- Civil Engineering (dual degree with Columbia University)
- Civil, Structural & Environmental Engineering
- Electrical Power Engineering
- Electronic & Computer Engineering
- Energy Systems Engineering
- Engineering with Business
- Manufacturing Engineering (double degree with EIT)
- Materials Science & Engineering
- Mechanical Engineering
- Optical Engineering
- Structural Engineering with Architecture

There are also research programmes available to students at both Master's and PhD level. The graduate opportunities in UCD are fantastic!

## WILL STUDYING ENGINEERING AT UCD NARROW MY CAREER OPTIONS IN THE FUTURE?

Absolutely not. Your engineering qualification from UCD will offer you great flexibility. The skills and knowledge you will gain in UCD are highly transferable and offer you a wide range of career options within the engineering profession and outside it, for example in business, finance or consulting.



### **Shamira Bagnall Hare** Mechanical Engineering Student

**Why did you choose to study engineering at UCD?** UCD offers the widest range of engineering stream and I wanted to explore as many options as possible. Additionally, UCD offers a lot of sports and also runs the Horizons programme through which I could continue my language studies. However, it was mostly the feeling I got when I stepped onto the UCD campus on the Open Day tours. UCD felt like home in a way that no other university did. Everybody I met felt genuinely happy and I wanted the same.

**What has your experience of studying Mechanical Engineering been like so far?** I've really enjoyed my time studying mechanical engineering at UCD. I love how much practical work we get to do. My highlight so far has been when I got to participate in a lab using UCD's wind tunnel. It was a surreal moment tilting an airfoil in the airstream and feeling it being pulled up and down by lift and drag, something I'd been curious about my whole life.

**Are you involved in any student societies?** Yes, UCD Formula Student, which is an independent, student led team who compete in an annual student racing competition at the iconic Silverstone Circuit in the UK. Every student who joins UCDFS benefits massively from gaining practical engineering project experience. We gain experience taking a project from concept to completion while following a set design brief. Here we also meet like minded individuals and industry experts.

**What would you like to do in the future?** I obviously love F1 and would love to end up working in the industry. I'm very passionate about design, fluid dynamics and CAD modelling so something that combines all three areas of interest would be great. I'm currently exploring options for my final year project and I've discovered adjoint topological shape optimisation which could be very applicable to the aerodynamics in F1 and also ties in CAD and design so maybe something in that area but I'm still open to any ideas.





### Year/Stage 1

Explore your options

**Core Modules:** Chemistry, Mathematics, Physics, Creativity in Design, Electrical/Electronic, Energy Engineering, Engineering Computing, and Mechanics



**Option Modules:** Biomedical Sciences, Chemical Engineering Process Principles, Computer Science for Engineers, Materials in Society, The Engineering & Architecture of Structures, Biosystems Engineering Design Challenge, Introduction to Civil & Environmental Engineering, Energy, Climate Change & Policy, and Robotics Design Project.



### Years/Stages 2 & 3

Choose your pathway

**Choose one of the following Engineering pathways:** Biomedical; Chemical & Bioprocess; Chemical with Biochemical Minor; Civil; Electrical/Electronic; Mechanical or Structural Engineering with Architecture.

**Optional Study Abroad or Exchange in 3rd Year**



### Years/Stages 4 & 5

Focus on your area(s) of specialisation

Entry to Master's degree programmes is subject to entry requirements.

#### BE (4 years) Bachelor of Engineering

**Specialise in one of the following areas:** Biomedical, Chemical & Bioprocess, Chemical with Biochemical Minor, Civil, Electrical, Electronic, or Mechanical

#### ME (5 years) Master of Engineering

**Specialise in one of the following areas:** Biosystems & Food; Biomedical; Chemical & Bioprocess; Civil; Civil, Structural & Environmental; Electrical Power Energy; Electronic & Computer; Energy Systems; Engineering with Business; Manufacturing; Materials Science & Engineering; Mechanical, Optical or Structural Engineering with Architecture.

**Professional Work Experience in 4th Year**

## WHY ENGINEERING AT UCD?



UCD is Ranked Among the Top 1% of Universities Worldwide



World Class Engineering Education



Widest Range of Engineering Degree Options



6-8 Month Internships on ME Programmes



Links with Major Employers



Access to Non-Engineering Modules (Horizons)



Various Accredited by Engineers Ireland, IOM3 & IChemE



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