



University College Dublin
An Coláiste Ollscoile, Baile Átha Cliath

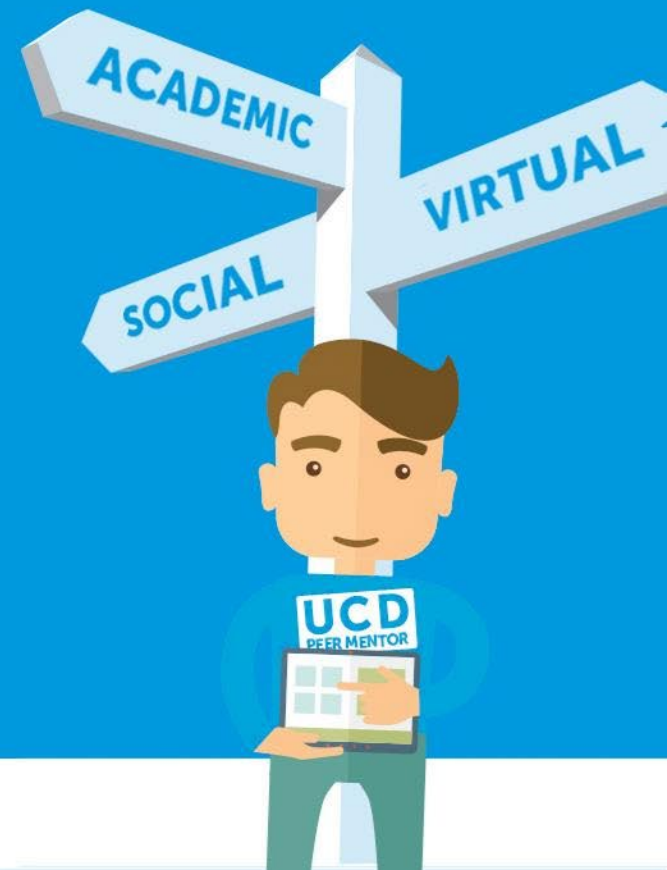
Engineering Programme Briefing – DN150

Thursday, 14 September, 10am

Dr Neal Murphy (Programme Director)

neal.murphy@ucd.ie

UCD 2023
ORIENTATION
#helloucd





Other Important College Contacts

Dean of Engineering, College Principal

- Professor Aoife Ahern

College of Engineering & Architecture Office

Director

- Ms Sue Philpott

Programme and Operations Manager

- Ms Debra Heeney

Student Advisor

- Dr Julia Maher



UCD Engineering & Architecture College Office

Room 122, First Floor, Engineering and Materials Science Centre

Ms Sue Philpott	College Office Director
Ms Debra Heeney	Programme & Operations Manager
Ms Shelly Smith	Programme Manager
Ms Claudia Schmid	Senior Programme Administrator
Ms Niamh Fitzgerald	Senior Programme Administrator
Ms Carolayne Dillon	Senior Programme Administrator

See: <https://www.ucd.ie/eacollege/contact/collegeadministration/>





How to contact the College Office Team

2023/2024 Opening Hours:

Office hours for **face-to-face meetings and drop ins** are Monday to Thursday 10am to 1pm and from 1.30pm until 4pm.



Office hours for **email contact** are 8.30am-4.30pm, Monday to Friday.





Contacting the College Office Team continued..

Contact us via the Connector: ucd.ie/eacollege/connector/

UCD Eng Arch Office Student Connector

Please provide the information as requested below and your query will be submitted directly to the UCD Engineering & Architecture Office.

You'll receive an email confirmation including details of when you can expect a reply.

Which of the following are you? *

Next Page

We are also happy to arrange meetings online via Zoom.





UCD New Students Website

Use this website to find really useful information such as:

- Brightspace Module: Introduction to UCD
- Welcome to UCD Guide
- How-to Guide Videos
- Orientation Timetables

UCD New Students
Mic Léinn Nua UCD

Accommodation

Getting to UCD

Getting Around UCD

Orientation ▾

Social, Sport & V

UCD NEW STUDENTS

Welcome to University College Dublin! We are delighted to have you join our vibrant community. As you embark on this exciting journey with us, know that we're here to guide you every step of the way.



<https://www.ucd.ie/newstudents/>



Dedicated Incoming Stage One Engineering Website:



<https://www.ucd.ie/eacollege/study/informationforincomingfirstyears/>



Important Dates!

Fee Payment deadline (first installment): Sunday 17 September
First day of lectures : Monday, 18 September

Online Registration closes: Friday, 29 SEPT

*Any trimester 1 modules dropped after that date will be subject to fees and will appear on your academic record.



Stage 1 Trimester 1 Engineering DN150 2023-24 Academic Year

Autumn Trimester

CHEM 10030	Chemistry for Engineers
CVEN 10040	Creativity in Design
EEEN 10010	Electronic & Electrical I
MATH 10250	Introductory Calculus for Engineers
CHEN 10040	Introduction to Engineering Computing
PHYC 10150	Physics for Engineers I

Labs/Tutorials pre -selected
for Autumn

**NO REGISTRATION TO
ELECTIVE IN AUTUMN
TRIMESTER**



Timetable

Set up as follows:

- Weekly on campus lectures **BUT lecture timetables can vary from week to week!**
- Make sure to check your timetable in SISWeb before you commence your studies.
- Keep an eye on your UCD Connect email for updates!



Assessment

Final Exam in 5 modules:

- CHEN10040- Intro. to Eng. Computing (worth 40%)
- CHEM10030- Chemistry for Engineers (worth 60%)
- PHYC10150- Physics for Eng. I (worth 60%)
- EEEN10010- Electronic & Elec. Eng. I (worth 65%)
- MATH10250- Intro. To Calculus for Eng. (worth 70%)

All modules have a substantial amount of Continuous Assessment spread over the the trimester (Design Projects, Lab Reports, Computer Programs, MCQ Quizzes, etc.)



Assessment Continued....

Continuous Assessment:

- Takes place in all modules over the Trimester, eg. MCQ's; in-class tests/quizzes; lab practicals, open book

Exams at end of Autumn Trimester:

- Revision week: **Saturday, 2 December – Friday, 8 December**
- Most modules use **2-hour examinations**
- Exams take place: **09 December to 21 December inclusive**

Exams at end of Spring Trimester:

- Fieldwork/Study period: **11 March to 24 March**
- Revision week: **27 April to 3 May**
- Exams take place: **4 May to 18 May**



Stage 1 Spring Trimester Engineering DN150 2023-24 Academic Year

Spring Trimester

Spring	MATH 10260	Linear Algebra for Engineers
Spring	PHYC 10160	Physics for Engineers II
Spring	MEEN 10050	Energy Engineering
Spring	MEEN 10030	Mechanics for Engineers

One Option from list of 4

Spring	BMOL 10030	Understanding Human Disease
Spring	CHEN 10010	Chem Eng Proc Principles
Spring	CVEN 10060	Engineering and Architecture of Structures
Spring	COMP 10060	Computer Sci for Engineers I

One free Elective (taken from within or outside Engineering).

Remember!

Practicals / Tutorials : You need to register to the associated practical/tutorial sessions to suit your timetable.



Selecting Option Modules

Option Module	What will be covered?	Who should take this?
BMOL 10030 Understanding Human Disease	This module will introduce students to Biomedical Science and the molecular basis of neuronal, cardiovascular, infectious, hormonal and immune diseases.	Strongly recommended for student's heading towards Biomedical Engineering .
CHEN 10010 Chemical Engineering Process Principle	This module introduces the principles and techniques that are used in the analysis of chemical and biochemical engineering processes.	Strongly recommended for student's heading towards Chemical & Bioprocess Engineering .
COMP 10060 Computer Science for Engineers I	This module provides students with a formal and structured introduction to computer programming using the C programming language, which underpins the Windows, Linux and MacOS operating systems in addition to a wide range of embedded systems in everyday products.	Strongly recommended for students heading towards Mechanical, Electrical & Electronic Engineering - useful for all Engineering students.
CVEN 10060 Engineering and Architecture of Structures	This module provides students with a core understanding of what makes buildings, and other structures, stand up. Engineering and Architecture students will work in together in groups to explore these issues.	Strongly recommended for student heading towards Civil Engineering or Structural Engineering with Architecture .



Select an Elective or ADDITIONAL OPTION per below

Please select 1 Elective Module. Alternatively, ADDITIONAL OPTIONS can be chosen to deepen your Engineering learning and give you more flexibility for next year.

Trimester	Module Code	Module Title	Credits
Spring	BMOL10030	Understanding Human Disease	5 Credits
Spring	BSEN10010	Biosys Eng Design Challenge	5 Credits
Spring	CHEN10010	Chem Eng Proc Principles	5 Credits
Spring	CVEN10050	Introduction to Civil and Environmental Engineering	5 Credits
Spring	CVEN10060	Engineering and Architecture of Structures	5 Credits
Spring	COMP10060	Computer Sci for Engineers I	5 Credits
Spring	DSCY10060	Energy, Climate & Policy	5 Credits
Spring	DSCY10070	Materials in Society	5 Credits
Spring	EEEN10020	Robotics Design Project	5 Credits
Spring	BSEN10020	How Sustainable is my Food?	5 Credits



Creativity in Design Module

materials needed for First Lecture

Individual Requirements

- Creativity kit, excluding object for film production €10.50 in **LIBRARY Union Shop**, excluding object for sketch study
- Drawing Pad – A3 Cartridge (pages approx. 115 g/m² but not less than 100g/m²)
- A5 Sketch Book (pages approx. 100 g/m²)
- Pencils – B, 2B
- Pencil sharpener
- Set square – 30°/60° 300mm side with mm gradation measurement
- Eraser
- Non-permanent marker (med. black)
- A small-ish inorganic object for sketch study (e.g. corkscrew, tin-opener, pepper mill, small hand tool, scissors)



Creativity in Design Module

Group requirements

- Additionally, for your Group work, the following equipment may be helpful for prototype creation* and can be purchased from the **LIBRARY SU Shop for €45.**
- *This list is not exhaustive, and some items may be replaced with other common household items
- Coloured markers – pack of 5 Faber Castell, Staedtler or Sharpie fine nib
- Plasticine – One 500g pack variety of colours
- Coloured A4 Card – 250g/m² variety of colours (5 colours, 10 sheets of each colour)
- Post-it blocks – pack 5 colours, small square (76mmx76m)
- Post-it blocks – pack 5 colours, rectangular (76mmx127mm)
- Scissors - 1 stainless steel
- Masking tape – 1 roll
- Stapler (1) and staples
- Rainbow craft sticks – small sticks pack of 100, large sticks pack of 50



MODULE LEVELS

LEVEL	SUMMARY DESCRIPTION
0	Foundation/Access
1	Introductory (e.g.....)
2	Intermediate
3	Degree
4	Masters
5	Doctoral





CREDITS & WORKLOAD

- The CREDIT is a unit of currency, part of the **European Credit Transfer System (ECTS)**, which is designed to allow movement of students between European Universities
- Each 5-credit module corresponds to about **100-125 hours of student effort** (including attendance at lectures, tutorials, practical work, and time spent on assignments, study, examinations etc.)
- Taking six 5-credit modules over a 15 week trimester (12 weeks teaching, 1 week revision, 2 weeks exams) implies an **average of 40 to 50 hours per week** – of overall student effort.



Essential Advice

- **Attend Lectures & Tutorials.**
- **Aim for an 'A' in Lab Reports & Assignments.**
- **Be Organized** – have a plan & stick to it.
- **Download recent Exam Papers**
& use these as a study guide.

REMEMBER!



- **You MUST PASS every module!**
- Resit Exam in Autumn, Spring or Summer – check Module Descriptor!



Module Grades

<https://www.ucd.ie/students/exams/gradingandremediation/understandinggrades/>

MODULE GRADES		
MODULE GRADE	GRADE POINT	DESCRIPTION
A+	4.2	Excellent
A	4.0	
A-	3.8	
B+	3.6	Very good
B	3.4	
B-	3.2	
C+	3.0	Good
C	2.8	
C-	2.6	
D+	2.4	Acceptable
D	2.2	
D-	2.0	
FM+	0.0	Fail
FM	0.0	
FM-	0.0	
NM	0.0	No grade - work submitted did not merit a grade
ABS	0.0	No work was submitted by the student or the student was absent from assessment



GRADE POINT AVERAGE (GPA)

- At the end of a Stage, all the grade points are averaged to get the **Grade Point Average** .

"Honours" Grades for a Degree

- Degree "Honours" classification is based on weighted calculation:
- Weighted by a factor of 7 for the final Stage and weighted by a factor of 3 for the penultimate Stage.
- However, your performance in all Stages is important for progression and your overall degree GPA!



"Honours" Grades for a Degree

GPA	AWARD
> 3.68	First Class honours
3.08 to 3.67	Second Class Honours, Grade 1
2.48 to 3.07	Second Class Honours, Grade 2
2.00 to 2.47	Pass



Becoming a Chartered Engineer

(C.Eng)

1. Complete a degree programme which is accredited by *Engineers Ireland* *, and
2. Have a minimum of four years postgraduate training and engineering experience.

* Graduates of accredited programmes are recognised in 29 European countries and are accepted as equivalent by professional bodies in Australia, Canada, Hong Kong, Japan, New Zealand, South Africa, UK and USA.



Chartered Engineers of the Future

- The registered professional title of Chartered Engineer is recognised internationally.
- “Engineers Ireland” regulations:
- *Engineers graduating from 2013 onwards will need a year accredited Master degree (or equivalent)*



UCD Engineering Degree Programmes

- **4-Year BE Degree**
- **5-Year BSc + ME Degrees (with specialisations)**
 - Graduate with BSc (Engineering Science) + ME (Master of Engineering) degrees.
 - Accredited professional engineering qualification.
- **5-Year BE + ME**
 - Graduate with BE + ME Chemical & Bioprocess Engineering
- **5-Year BSc + ME (Structural Engineering with Architecture)**
 - Graduate with BSc (Engineering Science) + ME (Master of Engineering) degrees.
 - Accredited Professional Engineering qualification.



Engineering Pathways to BE / ME

Year 1

Stage 1 Engineering (Common) - Core Modules

Physics		Chemistry		Mathematics	
Energy Engineering	Mechanics	Electrical/Electronic	Creativity in Design	Engineering Computing	

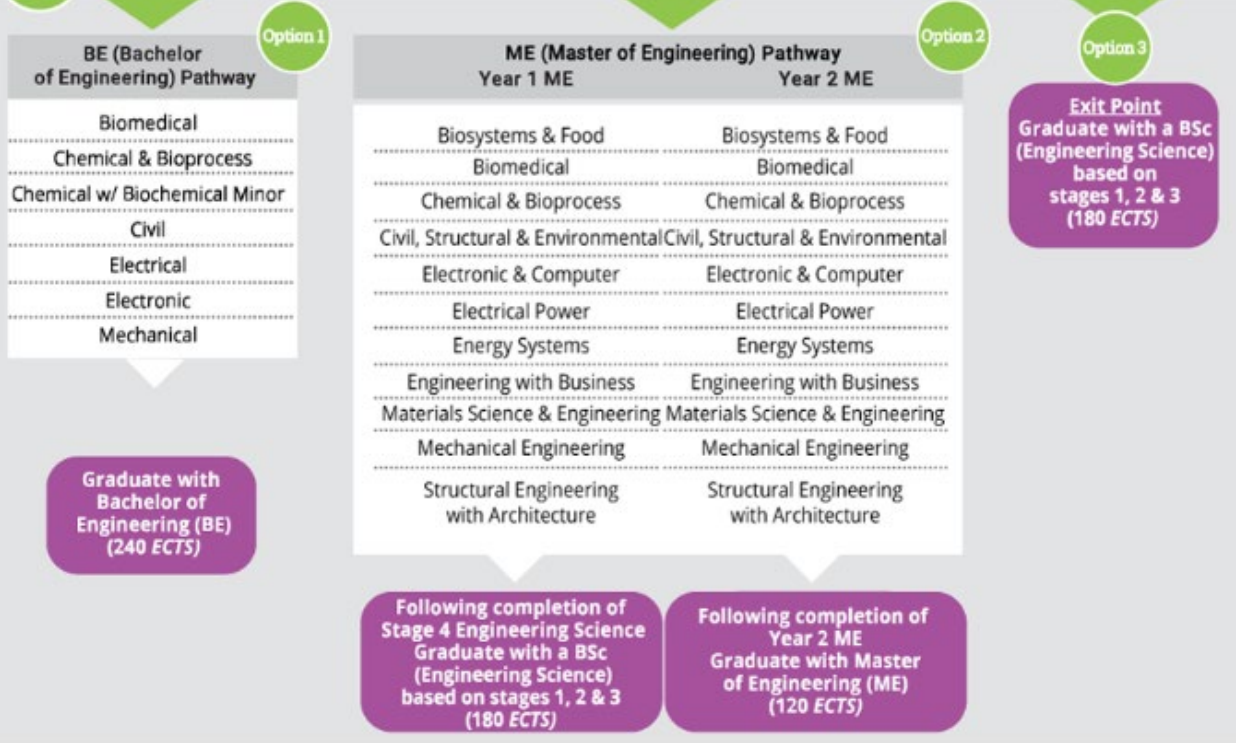
Years 2 & 3

Stage 2 & 3 Engineering - Programme Majors

Biomedical	Chemical & Bioprocess	Civil	Electrical/Electronic	Mechanical	Structural Engineering with Architecture
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Years 4 & 5

Decision Point





BE Degrees Available (for 2023 entrants)

- Biomedical Engineering
- Chemical and Bioprocess Engineering
- Civil Engineering
- Electrical Engineering
- Electronic Engineering
- Mechanical Engineering



UCD Study Abroad



Exchange Opportunities

Available – Depending on Programme

- Engineering – Stage 3
- For one trimester or full year

Requirements for Engineering Study Abroad

- Complete Stage 1 with a minimum GPA of 3.0
- Earn 30 credits in autumn trimester of Stage 2 with minimum GPA of 3.00
- No grade less than C - in any core module



Study Abroad

Arranged through UCD Global www.ucd.ie/global

Watch for information sessions this autumn

Erasmus exchange to a university in another European country

- So most lectures will be in the local language!
- recent exchanges to Paris, Lyon, Stuttgart

Non-EU exchange

- to a university outside Europe
- to USA, Canada, China, Singapore, Australia, New Zealand

The full details of the Exchange Rules can be found at:

<https://www.ucd.ie/eacollege/study/internationalprogrammes/erasmusnon-euexchangeprogramme/>



ME Degrees Available (for 2023 entrants)

- Biomedical Engineering
- Biosystems & Food Engineering
- Chemical & Bioprocess
- Civil, Structural & Environmental Engineering
- Electrical Power Engineering
- Electronic and Computer Engineering
- Energy Systems Engineering
- Engineering with Business
- Materials Science Engineering
- Mechanical Engineering
- Structural Engineering with Architecture



Which Discipline Should I Choose?

- We will run **Information Sessions** later in the Autumn Trimester
- Introduction to the disciplines and course overviews
- Speakers (UCD Engineering Graduates) will describe their careers
- More sessions in the Spring Trimester - more details about the courses & you will meet a selection of students to tell you the 'Real Story'!



Introduction to UCD Library

<https://www.ucd.ie/library/>

Welcome to UCD Library

Welcome (and welcome back!) to all new and returning students to our libraries.

See our New Students Guide →





Introduction to the Student Desk

<https://www.ucd.ie/students/studentdesk/>

New Students



Registration



Fees & Grants



Frequently Asked
Questions



Freshers Guide



Exams &
Assessments



Official Documents



Admissions





Communications



- **UCD Connect email** is the primary channel for official UCD communications. You will have received information regarding your computer and email account when offered your place in UCD.
- It is the responsibility of each student to regularly
- check their **UCD Connect email** account.
- When setting up your Mail Accounts, **CHANGE YOUR PASSWORD TO SOMETHING MORE SECURE.**





Thank You for Your Attention!

- **Contact Details:** Dr Neal Murphy
(Programme Director)
- **Office:** Room 313 Eng & Materials Science
Centre
- **Email:** neal.murphy@ucd.ie



Trust me I'm an Engineer!

