Welcome to UCD Science

An information evening for parents, guardians and partners.

Professor Jeremy Simpson (Dean)

Assoc. Professor Patrick Orr (Assoc. Dean)

Dr David Lillis (School of Computer Science)

Professor Lisa Ryan (Head of Sustainability Programmes)

Assoc. Professor Adrian O'Hagan (School of Mathematics & Statistics)

asdean.science@ucd.ie

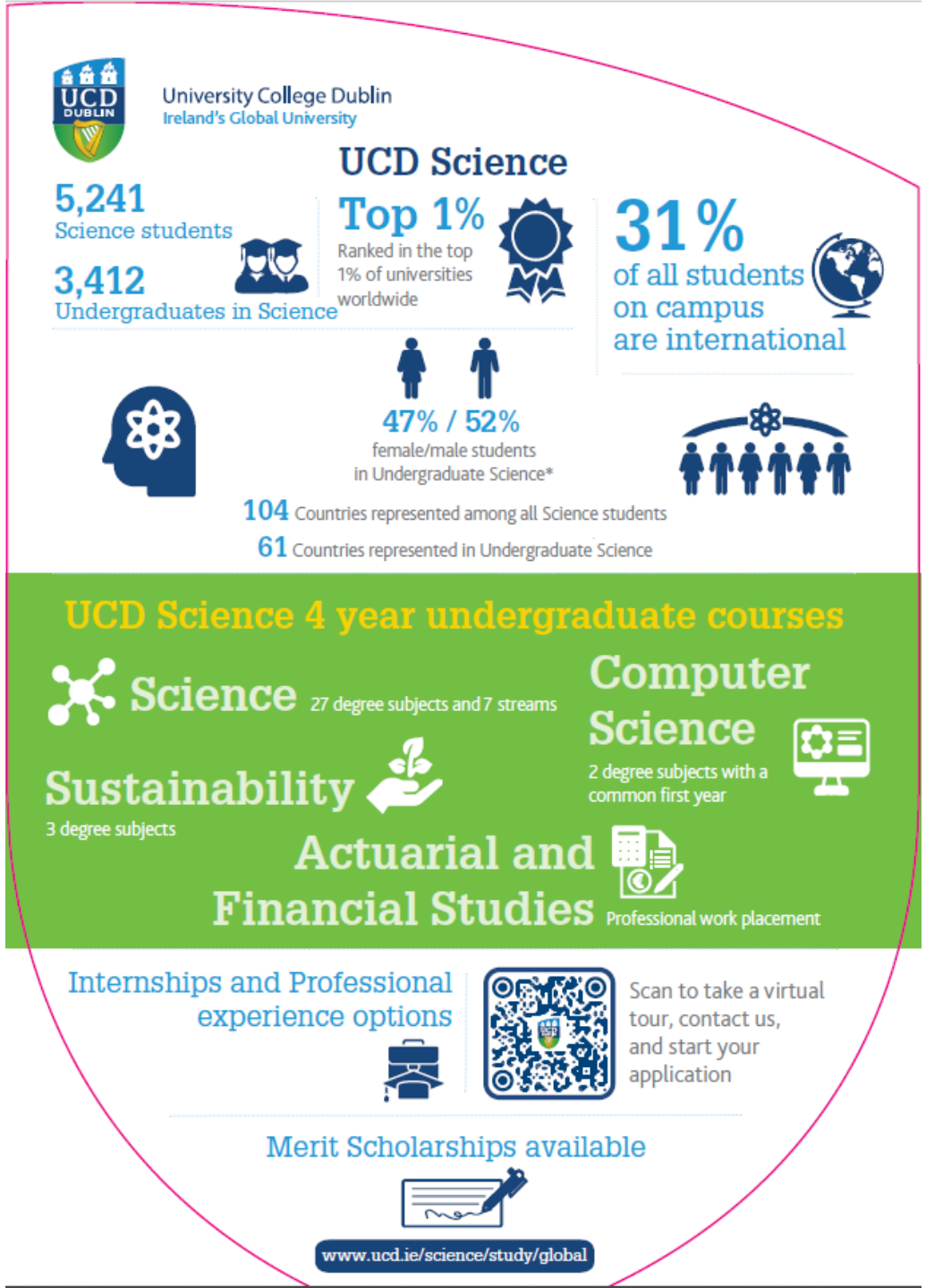
www.ucd.ie/science

@ucdscience

UCD Science

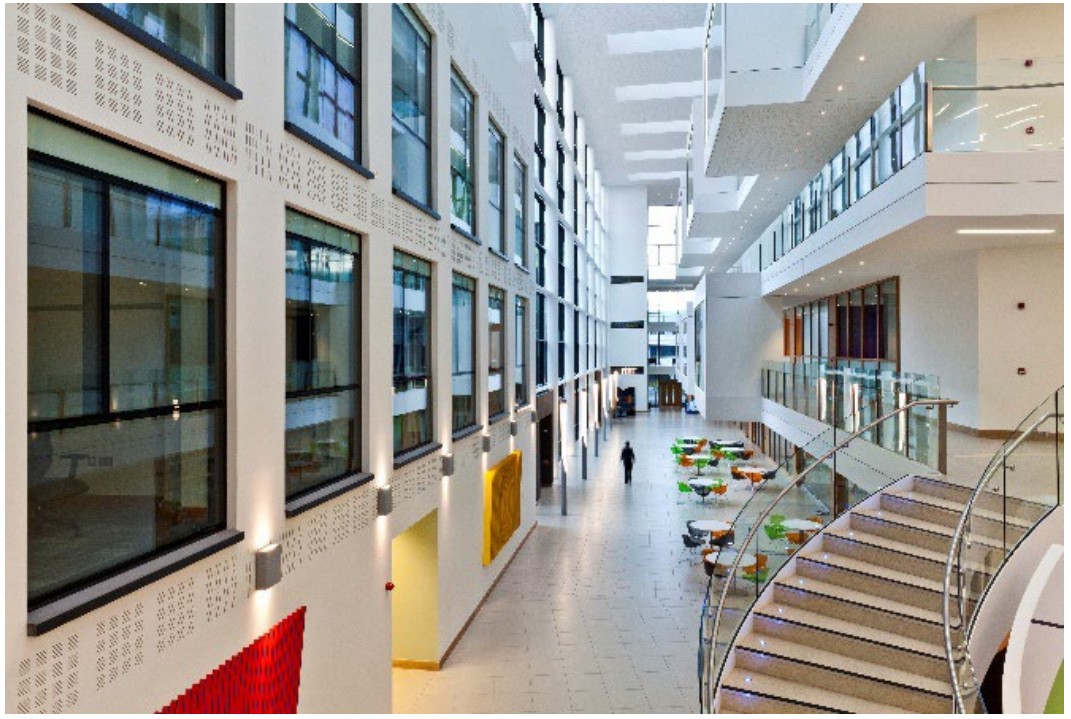
Professor Jeremy Simpson

College Principal & Dean of Science



UCD Science

Our programmes have a distinctive combination of features delivered in world-class facilities



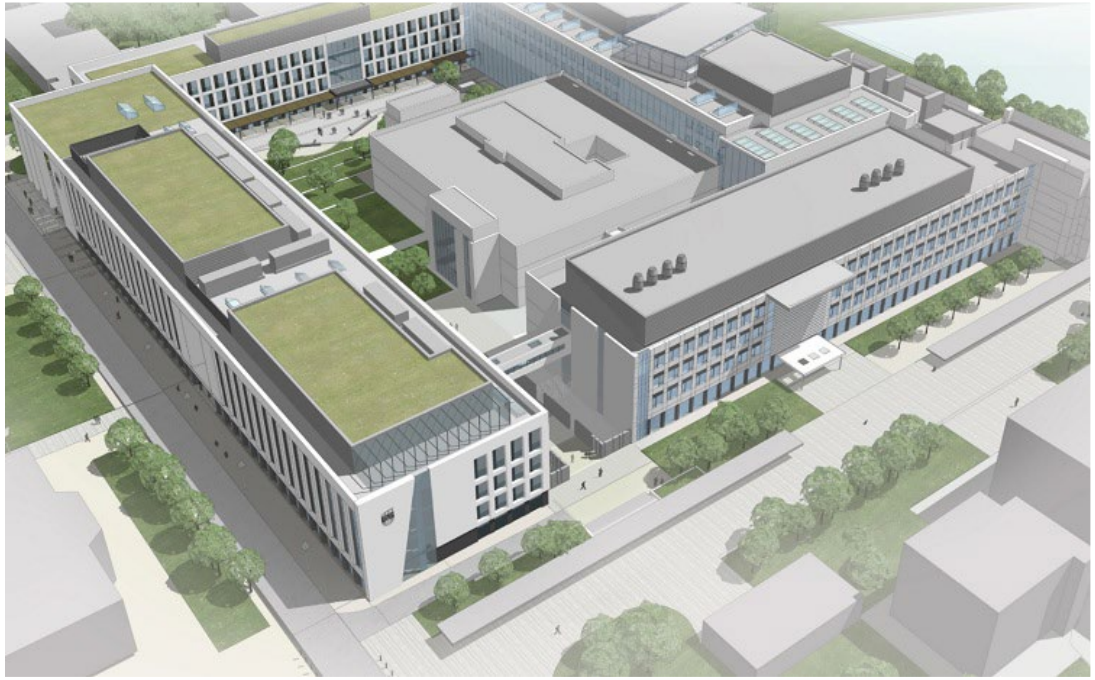
UCD Science

world class facilities

…some still in progress

UCD Science

Completion of the Science District by 2026 - state of the art laboratory and teaching facilities as part of UCD's €800 million development plan



"Completion of the Science Phase III project will result in UCD having one of the largest and most diverse Science facilities in Europe."

UCD SCIENCE
UNDERGRADUATE COURSES

Science

- 26 Degree Subjects across a range of disciplines
- Degree Subjects organised into six thematic streams
- Explore Multiple Streams

DN200

Computer Science

- Computer Science
- Computer Science with Data Science

DN201

Sustainability

- Sustainability with Environmental Sciences
- Sustainability with Social Sciences, Policy & Law
- Sustainability with Business & Economics

DN240

Actuarial & Financial Studies

- Actuarial & Financial Studies

DN230

DN200 Science

Science

- 26 Degree Subjects across a range of disciplines
- Degree Subjects organised into six thematic streams
- Explore Multiple Streams

DN200

Associate Prof. Patrick Orr

Associate Dean of Science

Science Streams

Science Streams

Earth & Environmental Sciences
- Environmental Biology
- Earth Sciences

Biological, Biomedical & Biomolecular Sciences
- Biochemistry & Molecular Biology
- Cell & Molecular Biology
- Environmental Biology
- Genetics
- Microbiology
- Neuroscience
- Pharmacology
- Physiology
- Plant Biology
- Zoology

Chemistry (includes Medicinal/Sustainable)
- Chemistry
- Chemistry with Environmental & Sustainable Chemistry
- Medicinal Chemistry & Chemical Biology

Mathematics (includes Applied/Financial/Statistics)
- Applied & Computational Mathematics
- Financial Mathematics
- Mathematics
- Statistics

Physics (includes Theoretical/Astronomy & Space Science)
- Physics
- Physics with Astronomy & Space Science
- Theoretical Physics

Science, Mathematics & Education
- Biology, Mathematics & Education
- Chemistry, Mathematics & Education
- Applied Mathematics, Mathematics & Education
- Physics & Mathematics & Education
- Computer Science, Mathematics & Education

Science
- 26 Degree Subjects across a range of disciplines
- Degree Subjects organised into six thematic streams
- Explore Multiple Streams

DN200

Explore Multiple Streams

2024 entry

Key Decisions and Pathway to Graduation

DN200

a brief introduction

highly flexible curriculum

1st Year – engage with the principles

- students enter with different learning experiences
- includes some core subjects required for all degrees, e.g. Mathematics
- **latitude in selection of topics (= modules) to study**

  allows breadth in terms of subjects selected – useful if not 100% sure what specific degree you want….

  …. but if more certain of what you want to study you can focus in on a particular discipline

- not disadvantaged by one option or other – you will be taking the core modules for a range of disciplines that underpin a variety of different degree programmes

Key Decisions and Pathway to Graduation

2nd Year

- greater focus on specific area of interest, but still keeping at least two degree subjects open
- end of 2nd Year chose your degree subject/minor

3rd and 4th Year

- focus on specific degree subject

Computer Science

Computer Science

- Computer Science
- Computer Science with Data Science

DN201

Assistant Prof. David Lillis

UCD School of Computer Science

Computer Science

CAO Points 533

- Does not assume prior knowledge of Computer Science (including prior programming)
- Emphasis is on software development and engineering, theory and practice
- Industry Internship in Third Year (Multinational and Irish companies available) OR a Software Project*

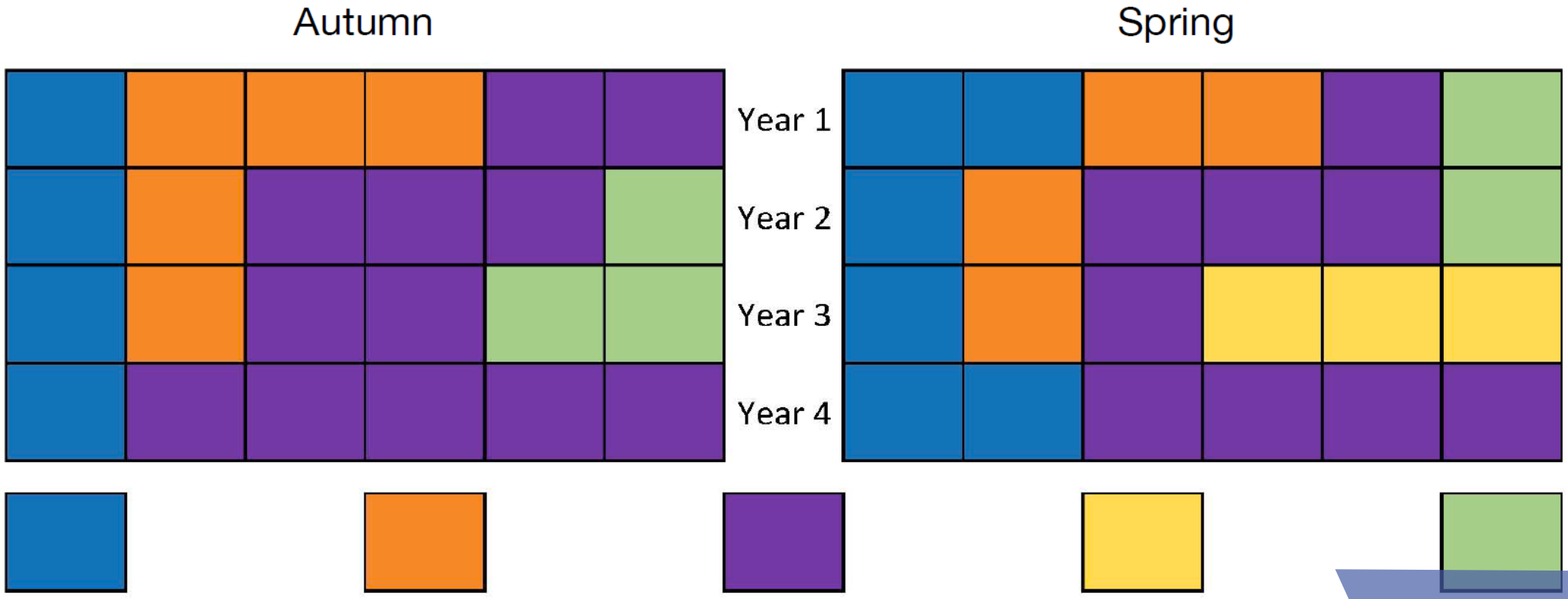
2 Degree Subjects

- Computer Science
- Computer Science with Data Science

*** All internships and placements are secured on a competitive basis.**

Computer Science

What do they learn over 4 years?



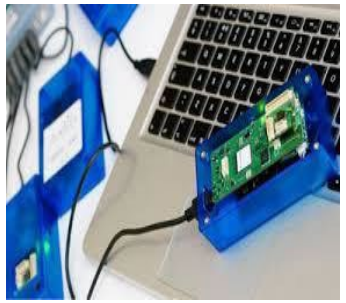
Computer Science

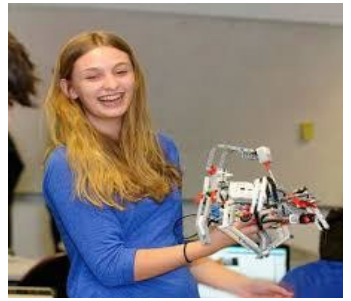
What are the opportunities for Computer Science graduates?

Computing, Analytics, Entrepreneurship, Computer Security Professional

Software Developer, Quality Insurance Engineer, UX Designer

Further Education and Research to become Computer Scientists





Sustainability

Sustainability

- Sustainability with Environmental Sciences
- Sustainability with Social Sciences, Policy & Law
- Sustainability with Business & Economics

DN240

Prof. Lisa Ryan

UCD School of Economics

Sustainability

CAO Points 531

- Common entry with guaranteed choice to pursue one degree subject at the end of First Year, assuming students meet all the academic requirements of the course.

3 Degree Subjects

- **Sustainability with Environmental Sciences**
- **Sustainability with Social Sciences, Policy & Law**
- **Sustainability with Business & Economics**
  - First Year is structured so that students can progress into their preferred degree option in Second Year

What will students study in first year?
- Core modules

- Mapping a Sustainable World
- Environmental Change & Policy

- Intro to Sustainability
- Sustainability Challenges

- Business Plan
- Intro to Accounting
- Energy, Climate Change & Policy

- Principles of Scientific Enquiry
- Intro. to Earth Sciences

What will students study in first year?
- A selection of option modules

- Earth & Humanity
- Anthropology: An Introduction
- People, Places, Regions

- Business in Society
- Economics and Sustainability

- Climate Change: Causes and Consequences
- How sustainable is my food?

- Life on Earth
- Astronomy & Space Science
- Cell & Plant Biology

Field Trip, Exchange and Internships

Stage 3

- Field trip to Copenhagen (September before Stage 3 begins)
- Exchange opportunities (Spring of Stage 3) – Asia, Australia, US, Spain, the Netherlands, Sweden
- Internship opportunities during the summer (6-12 weeks)

Actuarial & Financial Studies

Actuarial & Financial Studies

- Actuarial & Financial Studies

DN230

Assoc. Prof. Adrian O'Hagan

UCD School of Mathematics and Statistics

Actuarial & Financial Studies

CAO Points 613

Institute and Faculty of Actuaries

- **This degree is aimed at students with a very high proficiency in Mathematics**
- **Ideal for students considering a career in the actuarial or financial professions**

1 Degree Subject

- The Actuarial and Financial Studies degree at UCD offers potential exemptions from the Core subjects CS1, CS2, CM1, CM2, CB1, CB2 and CP1 of the professional examinations of the Institute and Faculty of Actuaries, UK.
- In Third Year there is a 6-month professional placement in insurance or financial institutions in Ireland, UK or the USA. This forms part of the degree.

INTERNSHIPS AND PROFESSIONAL EXPERIENCE

Science & Computer Science*	3 Months	Professional Science Placement for Third Year students
	5-6 Months	Industry placement (subject dependent)

* Available in most degrees but all placements are competitive.
Some are in academic environments or are field trips that form part of a course.

Actuarial & Financial Studies*	**6 Months**	Professional placement built into the programme

* Placements are not guaranteed and are competitive.
Our dedicated Internships Managers help students with the application process.
The companies we work with each year are subject to change.

Companies we have worked with in the past include:

- Intel
- Amazon
- Aon
- EY
- Salesforce
- Irish Life
- Dublin Zoo
- Takeda
- Allianz
- Google
- Ericsson
- EPA
- Deloitte
- Sanofi
- Citibank
- Pfizer
- Deutsche Bank
- Mastercard

Jargon Buster 1

- UCD is "**trimesterised**" : Each **Stage** (Year) is divided into 3 trimesters, with exams at the end of Trimester 1 (Autumn) & 2 (Spring).

- **Current trimester**
  - ends on **Saturday 21st December 2024**.
  - Teaching Period: **Monday 9th September – Friday 29th November**
  - Revision Period: **Saturday 30th November – Friday 6th December**
  - Exams start on **Saturday December 7th** and end **Saturday 21st December**

Jargon Buster 2

- UCD is "**modularised**"
- Each Stage (1-4) comprises 60 credits.
- Ideally, study 30 credits per trimester (autumn and spring)
- Typically, a module is worth 5 credits
- Some, usually in later stages, are worth more (e.g. "Projects")
- Modules are 'core', 'optional' and 'elective'

UCD SCIENCE

Core Modules

compulsory part of your programme

- **Cores** – must take these in a particular Stage (Year)
- **Conditional cores** – may need to take these depending on what you have studied previously or grades achieved
- **Programme cores** – Must take them but can be taken in either of 2 years

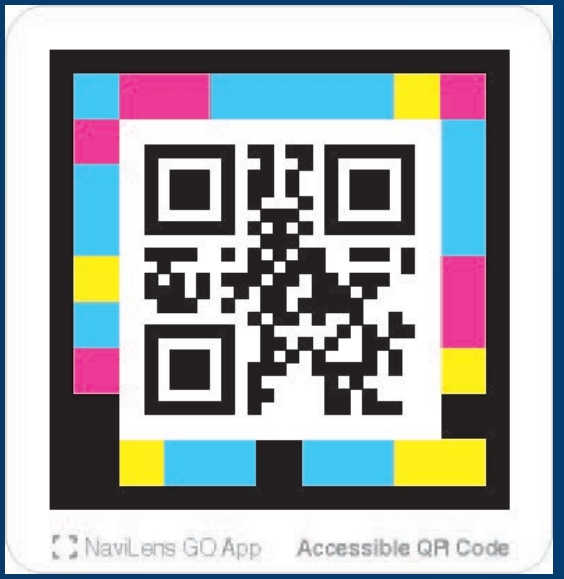
Jargon Buster 2, cont'd

Option Modules

- typically select a number from a "pool" of options
- options will be thematically relevant to a particular degree subject
- broaden your expertise in specific areas inside a degree programme

Elective Modules

- Stages 1-3 includes 5 elective modules:
- 1 in Trimester 2 of Stage 1
- 1 in each trimester in Stages 2 and 3
- can choose modules from across university- inc. from outside Science.
- opportunity to develop transferrable skills e.g. language
- Consider a Structured Elective



https://www.ucd.ie/students/videos/#h763612

Workload & Work Practice

Workload

- includes lectures, tutorials, laboratoryclasses, workshops, small group activity
- …amounts to ~40 hours per week, for the 15 weeks of a trimester – it's a **full time job**
- most modules include a component of **continuous assessment**

Work practice

- students have a wide range of resources at their disposal,
- we are all here to help,
- but students have **responsibility for their own learning**

Students will acquire discipline-specific knowledge …
…but also learn to form critical judgements, challenge knowledge taken for granted, question, learn with and from other students & staff, and become independent thinkers - tomorrow's leaders in their discipline

Assessment and Exams

- **Grades (Grade Points)** range from A+(4.2), A(4.0),….,D- (2.0), E,…, NG.
- **Grade Point Average (GPA)** : trimester/stage average of Grade Points. GPA of 2.0 is a pass. GPA of 4.2 is “perfect” !
- **Degree GPA/Class** : 70% final year, 30% penultimate year
- can carry only 2 module fails into Stage 2
- **Resit examinations :** Grade Point is capped at 2.0 *(resits are free)*
- **Repeat examinations** : Grade Point is reduced by 0.6
- **Communication** of results, performance etc. is **only** with the student and **not** with parents/guardians/partners.

sometimes it doesn't go to plan.....

..... can happen to anyone

Science Student Supports (1)

- **Mathematics Support Centre**
  - Provides assistance to students for completion of the Mathematics modules

- **Peer Mentors**
  - 1st years have each been assigned a peer mentor who is a student in Stage 2 or 3 of the programme

Science Student Supports

- **Science Office (https://www.ucd.ie/askscience/)**
  - Registration queries, programme queries, academic regulations and policies
  - General enquiries on academic, registration or other issues
  - **asdean.science@ucd.ie** (use your UCD email account)

E1.09

www.ucd.ie/science

@ucdscience

UCD SCIENCE

Contacting the Science Office

The Science **Connector Form** should be used as the first port of call for contacting the office. The form not only holds a lot of key information, but the queries you submit are monitored by a team of people and will be responded to quickly:
www.ucd.ie/askscience/

Appointments/Meetings

Drop-ins to the office are welcome from Monday to Friday from 10am-4pm daily

You can also request virtual meetings by using the Connector Form
www.ucd.ie/askscience/

Extenuating Circumstances :

- serious illness, accident, family bereavement, serious personal issues
- application should be made when assessment & exams are affected.

We are here to help you

UCD SCIENCE

Science Student Supports

- **Academic Staff and School Office Staff**
  - Available to discuss academic issues

UCD SCIENCE

UCD Student Advisers

Provide support with personal, social and emotional issues

Answer your questions about studying at UCD

Advise on financial supports for your time as a student

Help you to navigate UCD policies, procedures and services

UCD Student Advisers
College of Science

www.ucd.ie/studentadvisers

Dani Foy
dani.foy@ucd.ie

Áine Murphy
aine.murphy@ucd.ie

UCD Science – Thank you!

Professor Jeremy Simpson (Dean)

Assoc. Professor Patrick Orr (Assoc. Dean)

Dr David Lillis (School of Computer Science)

Professor Lisa Ryan (Head of Sustainability Programmes)

Assoc. Professor Adrian O'Hagan (School of Mathematics & Statistics)

asdean.science@ucd.ie

www.ucd.ie/science

@ucdscience