UCD SCIENCE

UNDERGRADUATE STUDENT HANDBOOK 2018-2019

WWW.UCD.IE/SCIENCE

SCIENCE DN200
ACTUARIAL AND FINANCIAL STUDIES DN230
COMPUTER SCIENCE DN201

University College Dublin
Ireland's Global University

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WELCOME TO UNIVERSITY LIFE!

The UCD Science Office extends a warm welcome to all our Science students for the academic year 2018/2019. As a UCD Science student you are part of the largest University in Ireland and we hope that your time here is an enjoyable and rewarding one, both in academic achievement and personal development.

While the first year at University offers many exciting opportunities, some students may have difficulties in adapting to a different form of education and new experiences. It is normal to feel overwhelmed when starting in Stage 1, trying to find your way around the campus, understanding all the policies and regulations, following a complex timetable, integrating into the University system and for some of you it will be your first experience of living away from home. Remember that you are not the only one feeling this way, many of your peers will be feeling exactly the same. Don't panic, all the information you receive during the Advisory Sessions will be available to you to refer to on our Orientation website at:
http://www.ucd.ie/science/study/currentundergraduatesciencestudents/orientation/

The Associate Dean of Science and the staff in the Science Office are always available to assist students with any problems they encounter, whether academic or personal. There is also a Student Adviser along with many other support staff in Science whose function is to ensure that you settle into University life as quickly and easily as possible.

We believe in the power of education to transform lives and we will do everything we can to ensure you are well supported and informed. We recognise that you are an individual with personal goals. Our team in the Science Office will do our best to empower and assist you to achieve your goals. We aim to provide you with a high quality service, giving you the best student experience we can.

It is important to remember, however, the value of your University experience depends upon the effort and commitment that you make. You are here to be educated as a professional in whatever scientific discipline you choose to study. Your lecturers in Science will direct your academic programme, but it is up to you to make the most of the variety of opportunities that University will present. We wish you every success in your endeavours.

Like many large organisations, UCD can seem to have a language of its own and you may find that some of the terminology used in the literature and online is new to you. **Please view the Jargon Buster** on the following link, which will help explain some of the more frequently used words:
http://www.ucd.ie/students/jargon.html

The Associate Dean of Science and staff in the Science Office are always available to offer advice and help to students whether it is an academic problem, a medical problem or in fact any problem at all!

Remember:

Don't hesitate to contact us – we're here to help!

UCD STUDENT CHARTER

University College Dublin (UCD) is a community of students and staff where scholarship and personal development are fostered, leadership cultivated, innovation encouraged and social conscience developed. Our University provides a very broad and exciting range of opportunities for students from all backgrounds, and staff and students have a responsibility to engage, participate and respect the services and facilities provided. Central to the aims and values of our University is respect and fairness, and every member of our community is required to uphold these values in all dealings with each other.

The UCD Student Charter summarises our aspirations and expectations for all members of our University community. It sets out the roles and responsibilities of the various groups within our University and outlines what students can expect from their University and what the University can expect from its student members. See: http://www.ucd.ie/studentcharter/documents/A4_Charter_Web_download_March_2014.pdf

In order to build and maintain a positive and encouraging academic environment, UCD has regulations, codes and policies. Students and staff should be familiar with and abide by these regulations and procedures. These are available at: http://www.ucd.ie/students/services.html

In particular, students must be familiar with the UCD Student Code, which sets out the procedures for managing breaches of good behaviour.

The UCD Student Charter should be read in conjunction with these regulations, codes and policies. If you have any queries about the Charter please contact studentcharter@ucd.ie.

WHY NOT VOLUNTEER TO HELP A COMMUNITY ORGANISATION?

Volunteering provides an opportunity for you to contribute to your local community, to get some real-life experience and to develop and demonstrate your skills, knowledge and adaptability. It is a pathway to personal and professional development and employers often ask about volunteering at interview. Volunteering is also a great way to get to know more people from different backgrounds. Volunteering brings a valuable opportunity to experience something totally different and maybe even to learn something new about yourself.

lf you are interested, view opportunities on the following links:
http://www.ucd.ie/ucdinthecommunity/
http://ucdblogs.ucd.ie/careers/2017/02/16/volunteering/
http://www.ucd.ie/students/guide/volunteers.html
https://www.studentvolunteer.ie/

WELCOME TO UCD GUIDES

The UCD Student Guide provides information on university services and resources to help you get the most out of your university experience. Visit: http://www.ucd.ie/students/welcome_guides.html

SCIENCE OFFICE STAFF

1st Floor, Room E1.09, O'Brien Centre for Science

T: (01) 716 2375/2355/2365/2684/2120

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Associate Dean of Science
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Programme Internship Officer
Ms Carla Naltchayan, Room E1.09A
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Deirbhle Carroll, Graduate School Manager
Room E1.09, UCD O'Brien Centre for Science
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2nd Floor, Room E2.09, O'Brien Centre for Science

Professor Joe Carthy, College Principal & Dean of Science
E: principal.science@ucd.ie
Carole Doyle
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Dr Orla Donoghue
Science Outreach Manager
E: orla.donoghue@ucd.ie T: (01) 716 2311
Gary Dunne
Science Student Outreach Assistant
E: gary.dunne@ucd.ie T: (01) 716 2637

The Science Office operates an "open door" policy. The Science Office is open during term between 9.30am and 5.00pm and closes for lunch between 1.00pm and 2.00pm. These office hours may be extended during peak registration times.

Any students seeking information can find out about available resources at the following places:

- Science Office website, www.ucd.ie/science
- Through your UCDconnect email account
- You can of course just drop into the Science Office, Room E1.09, 1st Floor, UCD O'Brien Centre for Science.

How We Contact You
- Through your UCDconnect email account
- Science Office website – www.ucd.ie/science

STAFF WITH SPECIAL RESPONSIBILITY FOR STAGE 1 STUDENTS

A member of the academic staff in each School in the Programme has been specifically designated to handle queries and problems that arise for new students.

Biology and Environmental Science:
Dr John Finarelli, Room E4.56, Science East T: 716 2347
Email: john.finarelli @ucd.ie

Biomolecular & Biomedical Science:
Assistant Professor Derek Costello, Room S056, Conway Institute T: 716 6775 Email: derek.costello@ucd.ie

Chemistry:

Associate Professor Mike Casey, Room S3.47, Science Centre-South
T: 716 2420 E-mail: mike.casey@ucd.ie

Computer Science:
Associate Professor Lorraine McGinty, Room A1.08, 1st Floor, Computer Science Building.
T: 716 2856 E-mail: lorraine.mcginty@ucd.ie

Geology:
Associate Professor Julian Menuge, Room G05A, Science Centre-West T: 716 2141 E-mail: j.f.menuge@ucd.ie

Applied and Computational Mathematics:
Associate Professor Miguel Bustamante
Room E0.89, T: 716 2236
E-mail: miguel.bustamante@ucd.ie

Mathematics:
Associate Professor Kevin Hutchinson, RoomG0.4C, Science North. T: 716 2577 E-mail: kevin.hutchinson@ucd.ie

Physics:
Professor Peter Duffy, Room 317, Science Centre, North.
T: 716 2232 E-mail: peter.duffy@ucd.ie

Statistics:
Dr Michelle Carey, Room S.013, Science South.
T: 716 2584 E-mail: michelle.carey@ucd.ie

Actuarial Science
Mr Colm Fitzgerald, Room S1.70a, Science South.
T: 716 2583 Email: colm.fitzgerald@ucd.ie

SCIENCE SOCIETY

The UCD Science Society is made up of a bunch of fun loving, hard working and slightly insane Science students who spend most of the day thinking about how to make your college life more entertaining, and coming up with great ways of raising money for CMRF, Our Lady's Children's Hospital, Crumlin. UCD SciSoc is now one of UCD's biggest societies and we are responsible for a range of events such as our famous "Cycle to Galway", our annual Science Day festival, the Science Ball and many more! Each year we bring great events, big and small, throughout both semesters. To top it off, all proceeds from our events go **DIRECTLY** to charity, so there's always that feel-good bonus too! Interested? Get involved! Whether you're a Science student, science enthusiast, or just want to take part in some fantastic events, you can get in contact with us at science.society@ucd.ie or on facebook at https://www.facebook.com/UCDScienceSoc

SERVICES AVAILABLE TO HELP YOU

Computer Science Support Centre, Room B1.03, 1st Floor, Computer Science Building.

The Computer Science Support Centre is a free drop-in service offering extra help to any students taking Computer Science modules, who are worried or having problems with computer programming. This is in addition to the normal tutorials. The Centre is staffed by a team of helpful senior tutors and is located on the first floor of the School of Computer Science and Informatics. The Centre provides a friendly, relaxed environment where students can drop-in to discuss their difficulties and receive one-to-one support throughout the year. Further details are available from email: cssc@ucd.ie or https://www.cs.ucd.ie/cssc/

Mathematics Support Centre, James Joyce Library Building

Mathematics and Statistics are relevant to all areas of Science. The Mathematics Support Centre is a free drop-in service offering extra help to any students who are worried about their Mathematics background. This is in addition to the normal tutorials. The Centre is staffed by a team of helpful senior tutors who provide a friendly, relaxed environment where students can drop-in to discuss their difficulties and receive one-to-one support throughout the year. If you enter the library the MSC is the glass room with the orange and green circles just to the left opposite the entrance. Further details are available from email: msc@ucd.ie or www.ucd.ie/msc

PEER MENTORING

Peer Mentors are Science students in Stage 2 or 3 who very generously give of their time to help welcome and support our Stage 1 students. The continued success of our Peer Mentoring programme is largely thanks to the energy, enthusiasm and commitment of our Peer Mentors every year. If you feel you would like to be a Peer Mentor please give your name and contact details to the Science Office or the Science Student Adviser. You will hear more about the recruitment of Peer Mentors in Semester 2, but please feel free to give us your details any time before then.

SOME USEFUL ADVICE

Part-time employment: an advisory note

The experience of staff and of other students in recent years suggests that part-time employment exceeding 10 hours per week during term, can interfere with your attendance at lectures, tutorials or laboratory classes and can adversely affect your academic performance. You are strongly advised not to undertake any part-time employment during the study week and if possible, you should not work at all in the period immediately before exams. If financial circumstances oblige you to take a part-time job that requires you to work for significant numbers of hours per week, you should seek advice from a Student Adviser or the Office of the Vice-President for Students.

Continuous Assessment

In most modules, up to 50% of the marks available are awarded as part of the continuous assessment taken during the modules. Our experience over the years is clear: students who attend lectures, tutorials and laboratory classes and complete the in-course assignments achieve much higher grades in their modules; **students who have a poor record of attendance commonly fail their modules.**

Lectures

Lectures are generally held from 9.00 am to 6.00 pm. Lectures commence on the hour and each is of 50 minutes duration.

Practicals

Practical (or laboratory) classes generally take place in the afternoons and are held in the laboratories relating to the particular subject areas. They are of two or three hours duration and involve carrying out selected experiments, examining scientific material and getting hands-on experience of practical subjects.
***N.B**. Check your personal timetable online for information on practicals.*

Tutorials

Tutorials are of particular benefit to students. Scientific discussion in a small group setting is an excellent method of instruction, encouraging questions and confirming understanding. It is vital that any problems with your subjects be discussed with the lecturers/tutors/demonstrators as soon as the problem arises. Do not wait until it is too late to seek help.

N.B. *Check your personal timetable online for information on tutorials.*

Deal with problems as they arise

If you don't understand – ASK!

Discipline

Good behaviour, especially in lectures, practicals and tutorials, is essential. This is especially true in science where classes may be large, safety may be an issue and where there is likely to be a mix of students, some with a basic grasp of the subject and others studying it for the first time. Mobile phones must be switched off during lectures, practicals and tutorials. Familiarise yourself with the 'Student Code' This can be viewed on the website – http://www.ucd.ie/governance/resources/policypage-studentcode/

Academic Integrity

Integrity is all about being honest and having good moral values. Academic integrity is simply integrity in an academic setting, i.e. in University. When you are a student in UCD, we encourage and expect that you will be honest and have high standards. This means avoiding behaviours that are considered dishonest. Most people know that it is dishonest to cheat in exams, and most people don't cheat; but there are other, much less obvious ways of being dishonest, and you may not even realise it. When you are writing your assignments, you will need to make sure that you avoid plagiarism.

What is Plagiarism?

Plagiarism is a **serious academic offence**. While plagiarism may be easy to commit unintentionally, it is defined by the act not the intention. All students are responsible for being familiar with the University's policy statement on plagiarism and are encouraged, if in doubt, to seek guidance from an academic member of staff. The University encourages students to adopt good academic practice by maintaining academic integrity in the presentation of all academic work.

Refer to online tutorial at: http://libguides.ucd.ie/academicintegrity/plagiarismandwriting

Printing, Copying, Scanning

There is a printing facility for students on the Ground Floor of the Science Hub (beside Room 0.46).
Copi-Print UCard machines (for Copying and Scanning) are available in the following locations:

- Arts J/K Area
- Quinn Business School
- Smurfit Business School
- Engineering
- Health Sciences
- Campus Library

See http://www.ucd.ie/library/use/printing/

INFORMATION ON INTERNSHIP PLACEMENTS IN STAGE 3/STAGE 4

UCD Science students have always had opportunities to complete internships. The Science Programme has now formalised a number of modules that enable internships to contribute credits to your degree, as follows:

SCI30080 Professional Placement - Science (5 credits) - available in a number of subjects (see: http://www.ucd.ie/students/course_search.htm). Internship takes place over 6-10 weeks in the summer between Stages 3 and 4. Module is Grade Point Neutral (i.e. does not influence GPA); credits contribute to Stage 4. The students eligible to register their interest in this module will be Stage 3 students in 2018-19.

GEOL30360 Work Placement - Geoscience (5 credits) – equivalent to SCI30080, but available only to Geology students. Internship takes place over 6-10 weeks in the summer between Stages 2 and 3. Module is Grade Point Neutral; credits contribute to Stage 3.

BMOL40200 Industry Research Project (25 credits) – available in specific biological subjects (see: http://www.ucd.ie/students/course_search.htm). Internship runs for 6 months, combining the summer after Stage 3 and Semester 1 of Stage 4. Students complete a research project during internship. Module **is <u>not</u>** Grade Point Neutral; credits contribute to Stage 4.

COMP30790 Industry Internship (15 credits) – available to Computer Science with Data Science students. Internship runs from March to mid August, taking up the second part of Semester 2 of Stage 3 and the summer. Module **is not** Grade Point Neutral, credits contribute to Stage 3.

Special registration arrangements are in place for these modules. For each, it is necessary to register your interest at the beginning of the academic year in which the internship will take place (e.g. for modules that will take place in the summer after Stage 3, interest must be registered at the beginning of Stage 3). Formal registration will then take place at the beginning of the Stage to which the credits will contribute (e.g. for SCI30080, which will contribute to Stage 4, formal registration will take place at the beginning of Stage 4, after the internship has taken place). See full details at www.ucd.ie/science/careers/internships/students/. All internships must be arranged in consultation with the College of Science Internship Officer, Carla Naltchayan, Tel. 716 2541, email carla.naltchayan@ucd.ie.

In order to complete an internship, students will first need to successfully apply for one in a competitive process. As such, we cannot guarantee that everyone who seeks an internship will succeed in gaining one. Students who will be on exchange during Stage 3, should make sure they maintain contact with Carla while they are away to maximize their chances of successfully securing an internship.

If a student embarks on an internship during the summer between Stages 3 and 4 and fails to progress to Stage 4 or opts to graduate with a 180 credit degree, they will be unable to register for the module in Stage 4; the module would not contribute credits, attract a fee or appear on a transcript. Nevertheless, the experience would be beneficial and could still be listed on a CV. Note that if your chosen degree subject does not include a credit-bearing internship module, but you would nevertheless like to complete an internship, please contact Carla Naltchayan (details above) and/or your Head of Subject for advice and assistance.

STUDENT EXCHANGE AND ERASMUS OPPORTUNITIES

Did you know you can go on exchange even if you don't speak a foreign language? UCD has exchange programmes with Australia, Canada, New Zealand, the UK and the USA as well as English-speaking opportunities in Asia and Europe.

You can go on Erasmus Exchange within Europe or further afield on a Non-EU Exchange. Students in the Science Programme may appy to go on an Erasmus or a Non-EU Exchange for a semester or full academic year in Stage 3 of their studies. Applications for Exchange are made in the academic year prior to going abroad. In most cases this means students who have entered Stage 2 in September 2018 would apply to go on exchange for a semester or academic year of 2019-2020.

Visit http://www.ucd.ie/international/going-abroad-with-ucd/exchanges/ to see where and when you can go and when and how you should apply.

Note that the credits accumulated during an exchange are Grade Point Neutral in relation to your UCD GPA and do not contribute to the calculation of your final degree GPA. Students will receive a transcript from the host institution. However, **if a student is on exchange for a full academic year and opts to exit with the 180 credit BSc (General Science) Degree,** then a Stage 3 GPA will be calculated and will be included in their degree award calculation. The degree award in such cases will be calculated on the basis of Stage 3 (70%) and Stage 2 (30%). You can find full details on the Degree Calculation on the Science Webpage under Student Exchanges at: http://www.ucd.ie/science/study/currentundergraduatesciencestudents/degreegpacalculation/

SCIENCE STAGE 1 ACADEMIC ADVISORY MEETINGS

Stage 1 Science Students: 5th and 6th September 2018

This is a **compulsory meeting** for Stage 1 students. Incoming Stage 1 students will be split into two groups for the purpose of this meeting, students in **Group 1 (DN200BBB, DN200CCS and DN230)** should attend their Advisory Session on 5th September; **Group 2 (DN200 and DN200MPG and DN201)** should attend their Advisory Session on 6th September. The advisory meetings will commence with an address from the Associate Dean of Science to students in the Moore Auditorium, UCD O'Brien Centre for Science. Following this, representatives from all the Science disciplines will be available on the Ground Floor concourse, UCD O'Brien Centre for Science, for consultation on the selection of modules**.** Advisory Sessions for Denominated Programme entry students (Computer Science DN201 & Actuarial & Financial Studies DN230) will be managed locally in the individual Schools.

Pre-Stage 2 and Pre-Stage 3 Advisory Meeting: February 2019, 1:00 pm (Date and Venue will be confirmed in early 2019)

This is a **compulsory meeting** for current Stage 1 and Stage 2 students in DN200. The advisory meeting commences with a talk to students. Information relating to Stage 2 and Stage 3 subject areas will be provided.

DATES FOR ACADEMIC SESSION 2018/2019

Semester 1	
Teaching Term:	10th September 2018 – 30th November 2018
Revision:	1st December 2018 – 9th December 2018
Examinations:	10th December 2018 – 21st December 2018
Semester 2	
Teaching Term:	21st January 2019 – 8th March 2019
Fieldwork/Study period	11th March 2019 – 24th March 2019
Teaching Term:	25th March 2019 – 26th April 2019
Revision:	27th April 2019 – 5th May 2019
Examinations:	7th May 2019 – 18th May 2019
Easter Sunday:	***21st April 2019***
May Bank Holiday:	***6th May 2019***

SCHOOLS AND ASSOCIATED SUBJECTS

SCHOOL NAME	SUBJECTS
Biology and Environmental Science	Cell & Molecular Biology, Environmental Biology, Plant Biology, Zoology, Biology, Mathematics &Education (Biology pathway).
Biomolecular and Biomedical Science	Biochemistry & Molecular Biology, Genetics, Microbiology, Neuroscience, Pharmacology, Biology, Mathematics & Education (Biology pathway).
Chemistry	Chemistry, Chemistry with Biophysical Chemistry, Chemistry with Environmental & Sustainable Chemistry, Medicinal Chemistry & Chemical Biology, Chemistry, Mathematics & Education (Chemistry pathway).
Computer Science	Computer Science
Earth Sciences	Geology
Mathematics and Statistics	Applied & Computational Mathematics, Mathematics, Financial Mathematics, Statistics, Theoretical Physics, Actuarial & Financial Studies, Applied Mathematics, Mathematics & Education – All four pathways.
Medicine	Physiology
Physics	Physics, Physics with Astronomy & Space Science, Theoretical Physics, Physics, Mathematics & Education (Physics pathway).
School of Education	Science, Mathematics & Education (All four pathways).

MODULE CODES AND ASSOCIATED SCHOOLS

Most module codes start with four letters and are associated with a particular School. To help you identify which module belongs to which School please see the list below.

ACM	School of Mathematics & Statistics
AESC	School of Agriculture, Food Science & Veterinary Medicine
ANAT	School of Medicine
BIOC	School of Biomolecular & Biomedical Science
BIOL	School of Biology & Environmental Science
BMOL	School of Biomolecular & Biomedical Science
BOTN	School of Biology & Environmental Science
CELB	School of Biology & Environmental Science
CHEM	School of Chemistry
COMP	School of Computer Science
ENVB	School of Biology & Environmental Science
FOR	School of Agriculture, Food Science & Veterinary Medicine
GENE	School of Biomolecular & Biomedical Science **OR** School of Biology and Environmental Science
GEOL	School of Earth Sciences
HORT	School of Agriculture, Food Science & Veterinary Medicine
MATH	School of Mathematics & Statistics
MDSA	School of Medicine
MEMI	School of Medicine
MICR	School of Biomolecular & Biomedical Science
MST	School of Mathematics & Statistics
NEUR	School of Biomolecular & Biomedical Science
PHAR	School of Biomolecular & Biomedical Science
PHYC	School of Physics
PHYS	School of Medicine
SCI	School of Biology & Environmental Science/School of Physics
STAT	School of Mathematics & Statistics
ZOOL	School of Biology & Environmental Science

SCHOOL CONTACTS

SCHOOL	ADMINISTRATOR (Undergraduate)	PHONE NUMBER
Biology and Environmental Science	Helen McCarthy	716 2385
Biomolecular and Biomedical Science	Mary O'Brien/ Liz Hannon	716 2769/2768
Chemistry	Deirdre Murphy	716 2425
Computer Science	D'Arcey Jackson / Lorraine McHugh	716 2483 / 2469
Earth Sciences	Sarah Procter	716 2331
Mathematics & Statistics	Nuria Garcia Ordiales	716 2560/2562
Medicine	Anthony Hyland	716 6635
Physics	Bairbre Fox	716 2210/2361

Timetable Information

Personalised timetables based on individual students' module selection are available through the Student Web. In SIS you will be able to view your Semester 1 and Semester 2 Timetable and your Examination Timetable (when published).

To access SIS:-

- Click on SIS Student Web on the right side of the main UCD home page (www.ucd.ie)
- Enter your Student Number and PIN
- Click on Login

EMAIL AND INTERNET USAGE

UCD Email Accounts: You should use your UCD email account when communicating with Lecturers and Science Office staff. The Science Office communicates with you by email through your UCD email address.

All students have an obligation to regularly check their UCD email accounts and are bound by notices and information posted to these accounts.

Email Etiquette

Email communications should follow the same standards expected in written business communications.

- Lecturers should be addressed appropriately.
- Student name, student number, stage, class and group must be provided.
- Students must ensure that their reply email address is functional.
- The tone of any communication must be respectful.

Inappropriate Content: You must not present for I.T. Support or in class with inappropriate content on desktop wallpaper, screensavers, and homepage. Support Staff reserve the right to refuse to support a system with such content on display.

Network Usage: You should adhere to the general guidelines on computer and email usage detailed in the "Acceptable Usage Policy for UCD Computer and Network Systems" This document can be located at:

http://www.ucd.ie/itservices/aboutus/acceptableusepolicy/

Blackboard

Check announcements daily for important messages in your courses or from your programme.

Use distribution lists with caution; send emails only to recipients who need the information. Distribution lists available via Blackboard should only be used for academic purposes.

Blackboard discussion boards are only to be used for their intended purpose. Any postings with inappropriate or offensive content or postings made under false names will result in disciplinary action.

While most module course information will be available on Blackboard, it should be noted that not every Module Coordinator will choose to upload course notes, etc.

Jargon Buster

You may find that some of the terminology used in the literature and online is new to you and to help you with this you can access our online 'Jargon Buster' on the following link: http://www.ucd.ie/students/jargon.html

EXTENUATING CIRCUMSTANCES

If you experience difficulties which have caused you to miss a substantial number of lectures, have significantly affected your ability to study or complete assessments (continuous assessment and/or examinations) or have adversely affected your performance in any assessments you have undertaken, your circumstances can be taken into account, for example by providing the opportunity to resit or repeat the module without academic or financial penalty. Typically such unforeseen circumstances could include events like an accident, a crime, family bereavement, serious illness or other serious personal or emotional circumstances. Whatever the circumstances affecting you, you should seek advice from a member of academic staff, a student support professional, a Science Office staff member or the Students' Union support staff. From an academic perspective, **if your circumstances are straightforward and easily documented with a medical certificate (e.g. short illness or minor injury), you should first contact the module coordinator and ask whether your circumstances can be taken into account by them and a local solution put in place.** There are remedies for short absences that can be implemented quickly during the teaching term if the Module Coordinator is aware of the absence. If your circumstances are more personal or complex or if the Module Coordinator advises you to, you should submit an application for extenuating circumstances via the online system.

The online system can be accessed through your online registration under the **'Programme Services'** tab. When you complete the application form online you are required to submit hard copies of the appropriate original supporting evidence to the Science Office as close as possible to the time the circumstances occurred and **within 10 working days of the documented period affected.** The final deadline for submission of the online form and supporting documentation **in relation to end of semester examinations** is **5 working days** after the end of the relevant semester examination period and applications received after this deadline **will not normally be accepted.** It is the student's responsibility to ensure that an application and supporting documentation are submitted to the Science Office within the permitted timeframe. **Applications marked as 'Awaiting Evidence' are not considered to be submitted until the supporting documentation is presented to the Science Office.**

Please note that medical certificates, which must be on stamped headed notepaper, should state the dates that you were unfit/unable to attend university or that your performance or ability to perform may have been affected. It should also be noted that supporting documentation must be consistent with the application in terms of matters such as dates, circumstances, etc. The Science Taught Programme Board reserves the right to reject any application where there are discrepancies between the supporting documentation and the application.

For full details of the extenuating circumstances visit:

UCD Policy on Extenuating Circumstances:

https://sisweb.ucd.ie/usis/!W_HU_MENU.P_PUBLISH?p_tag=GD-DOCLAND&ID=126**

UCD Policy on Late Submission of Coursework:

https://sisweb.ucd.ie/usis/!W_HU_MENU.P_PUBLISH?p_tag=GD-DOCLAND&ID=137

Disability Support Services

Students who require ongoing support and accommodation on the grounds of a verifiable disability are encouraged to register with the Disability Support Service at their earliest convenience. For further information please refer to: http://www.ucd.ie/all/supports/disabilitysupport/

Temporary Exam Support is arranged by Access & Lifelong Learning for students sitting official end of semester exams who require exam supports due to recent injury or illness. For example, a student who has broken their wrist may benefit from the use of a computer or other support to complete their exam.

http://www.ucd.ie/all/supports/temporaryexamaccommodations/

Foreseen Absence from College

Circumstances that prevent a student from attending lectures, practicals, tutorials, in-semester assessments or examinations **that are known in advance** are **NOT** considered extenuating circumstances and students should ensure that arrangements have been put in place with module coordinators and/or Schools **in advance of the absence**. Retrospective claims for foreseen circumstances will not be accepted.

POLICY ON LATE SUBMISSION OF COURSE WORK

Coursework must be delivered by hand to the School Office (or other location designated by the School) or submitted electronically via an approved system, no later than 3 p.m. on the due date unless otherwise instructed by a Module Coordinator. Usually coursework received at any time within two weeks of the due date will be graded, but a penalty will apply.

University Policy states that coursework that is late by up to one week after the due date will have the grade awarded reduced by two grade points (e.g. from B- to C); coursework submitted up to two weeks after the due date will have the grade reduced by four grade points (e.g. B- to D+). Coursework received more than two weeks after the due date may not be accepted.

Submission dates may be extended in exceptional circumstances and students must apply for an extension in writing to the School and stating the reasons for seeking the extension.

See the following web address for the full policy details:

https://sisweb.ucd.ie/usis/!W_HU_MENU.P_PUBLISH?p_tag=GD-DOCLAND&ID=137

UCD EXAMINATION REGULATIONS

- Candidates should be in attendance at the Examination Centre at least **a quarter of an hour before** the commencement of each examination
- They should be **seated and silent at least 5 minutes prior to the commencement of all examinations** and should pay strict attention to details of emergency and safety procedures and to a list of instructions that are provided by the Invigilator-in-Charge.
- Except in **exceptional circumstances** and at the discretion of the Invigilator-in-Charge, candidates:
  - Will **not normally be admitted** to the Examination **Centre if they are more than 15 minutes late**. Candidates who arrive late should notify the invigilation team leader of their presence and wait to be seated by an invigilator.
  - Will **not be permitted to leave the hall until one hour has elapsed** after the time at which the examination began (an early exit may prevent entry by any latecomers).
  - **Will not be allowed to return to the Examination Centre**
- Candidates will not be permitted to leave the Examination Centre **during the final 10 minutes** of the examination period (this facilitates the orderly collection of examination scripts).
- Students who are required to register and have not done so may be refused permission to sit an examination. Repeating students who are required to register for examinations and fail to do so may be refused permission to sit those examinations. Candidates are required to be in possession of their Student Card, which should be displayed on their desk.
  For more detail see: http://www.ucd.ie/students/assessment/documents/examregulations.pdf

Procedure if you are absent or late for an examination

If you are absent from an examination due to extenuating circumstances you should contact the Science Office as soon as possible for advice.

If for some reason you find that you may be late for an examination, it is advised that you should still attend the Examination Centre, where it may be possible that arrangements can be put in place to facilitate you.

DO NOT PANIC

ATTEND THE EXAMINATION CENTRE AS SOON AS POSSIBLE

OR

CONTACT THE SCIENCE OFFICE AS SOON AS POSSIBLE FOR ADVICE

STRUCTURED ELECTIVE and MINOR PATHWAYS

A structured elective is a small but coherent block of elective modules, amounting to a minimum of 15 credits. For example, if a BSc Chemistry student takes elective modules which constitute the Structured Elective in Mathematics with Applications during their degree, their transcript will state that in addition to their BSc Chemistry Degree they have also been awarded a 'Structured Elective in Mathematics with Applications'

Note: In order to receive a Structured Elective in a given area **you must take the required modules as General or In-Programme Elective modules** and **not** as Core or Option modules**.** Any module registered as an Option or a Core module cannot be used as part of the Structured Elective.

For 2018-2019 the **School of Mathematics and Statistics** will offer Structured Elective pathways in:

- **Statistics and Data Analytics**

  Students select three modules as elective modules from the list during Stage 1, Stage 2 and Stage 3 of their degree. ***Note:*** These modules can be taken in any order and at any stage as none is pre-requisite for any other. However, it is suggested students would consider registering to Level 1 modules before the Level 2 modules.

  STAT10140 Research Methods for Science, STAT10050 Practical Statistics

  STAT10060 Statistical Modelling, STAT20070 Data Modelling for Science

  STAT20100 Inferential Statistics, STAT20110 Probability Theory

- **Mathematics with Applications**

  Students must take:

  One of MST20070 or MATH20290; **One of** MST20050 or MATH20260

  One of ACM10070 or ACM20030 or MATH20270

For 2018-2019 the **School of Earth Sciences** will offer a Structured Elective pathway in:

- **Introduction to Earth Sciences and Global Change**

  Students select three modules from the list during Stage 1, Stage 2 and Stage 3

  GEOL10030, GEOL10040, GEOL10050, GEOL10060 and GEOL20110. ***Note:*** These modules can be taken in any order **EXCEPT** GEOL10060 is a co-requisite for GEOL10030 and it is recommended that students should take GEOL10060 in Semester 2 of Stage 1

Details on structured electives can be found on the Science student noticeboard at:
http://www.ucd.ie/science/study/currentundergraduatesciencestudents/

OR view: http://www.ucd.ie/students/electives/structuredelectives.html

MINOR IN DATA SCIENCE

A Minor is a more substantial body of work complementary to your degree major. In 2017-18, the School of Computer Science launched a Minor in Data Science in collaboration with the School of Mathematics and Statistics. Data Science brings together key ideas from computer science, statistics, design, psychology, cognitive science, the humanities, and social sciences to recognise and understand patterns within large, diverse datasets and craft compelling narratives with and about data. The Minor is available to take in conjunction with a number of subjects, currently Genetics, Environmental Biology, Cell and Molecular Biology, Zoology and Plant Biology but the list is expected to expand. It will involve 50 credits in total: 15 in Stages 1 and 2 and 35 in Stages 3 and 4, including a team project. These credits are primarily earned through taking specific elective modules. For further details see: https://www.cs.ucd.ie/data-science-minor

USEFUL WEB ADDRESSES	
Science Programme Office	http://www.ucd.ie/science/
Assessment Unit	http://www.ucd.ie/students/assessment
Fees & Grants Office	http://www.ucd.ie/students/fees
UCD International	http://www.ucd.ie/international/
UCD Student Desk	http://www.ucd.ie/students/studentdesk/
UCD School of Computer Science	http://www.cs.ucd.ie/
UCD School of Earth Sciences	http://www.ucd.ie/geology
UCD School of Mathematics & Statistics	http://www.ucd.ie/mathstat/
UCD School of Physics	http://www.ucd.ie/physics/
UCD School of Biology & Environmental Science	http://www.ucd.ie/bioenvsci/
UCD School of Biomolecular & Biomedical Science	http://www.ucd.ie/sbbs/
UCD School of Chemistry	http://www.ucd.ie/chem/
UCD School of Medicine	http://www.ucd.ie/medicine/
UCD Student Health Service	http://www.ucd.ie/stuhealth/
Please Talk (Information on Student Support Services)	http://pleasetalk.ie/ucd/
IT Services	http://www.ucd.ie/itservices/
UCD Library	http://www.ucd.ie/library/
UCD Student Advisers	http://www.ucd.ie/studentadvisers
UCD Conferring Unit	http://www.ucd.ie/confer/
UCD Current Student Website	http://www.ucd.ie/students/

SCIENCE UNDERGRADUATE DEGREE PROGRAMMES

The primary degree awarded in Science is the Honours (Level 8) Bachelor of Science (BSc) following completion of 4 Stages in the programme (240 credits). Generally this requires 4 years of study. A BSc (General Science) Honours degree may be awarded to students who exit after 3 Stages of study (180 credits). Both of these degrees are Level 8 honours degrees. Students who do not achieve a minimum stage GPA of 2.48 at the completion of Stage 3 will not be permitted to progress to Stage 4.

BACHELOR OF SCIENCE (BSC) DEGREE SUBJECTS

(i) BSc Single Major - The subject is chosen from the following:

- Applied and Computational Mathematics
- Biochemistry & Molecular Biology
- Cell & Molecular Biology
- Chemistry
- Chemistry with Biophysical Chemistry
- Chemistry with Environmental and Sustainable Chemistry
- Physiology
- Environmental Biology
- Financial Mathematics
- Genetics
- Geology
- Mathematics
- Medicinal Chemistry & Chemical Biology
- Microbiology
- Neuroscience
- Pharmacology
- Physics
- Physics with Astronomy & Space Science
- Plant Biology
- Statistics
- Theoretical Physics
- Zoology

(ii) BSc Joint Majors

Joint Majors comprising a pairing of *some* subjects from the above list may be taken. The choice of subjects is contingent on the approval of the Schools concerned. Not all combinations may be available. For the academic year 2018-2019 Joint Majors **may be available** in the following subject areas and **must have the permission of the relevant Heads of Schools**

- Applied & Computational Mathematics
- Cell & Molecular Biology
- Mathematics
- Physics
- Plant Biology
- Statistics
- Zoology

(iii) Mathematics & Science Education

On completion of a four-year BSc in Science, Mathematics & Education, followed by a one year MSc in Mathematics & Science Education you will be a fully qualified post-primary teacher of Mathematics and either Applied Mathematics, Biology, Chemistry or Physics to Leaving Certificate level depending on your specialization. If you have taken the pathway with either Biology, Chemistry or Physics, you will also be qualified to teach Science to Junior Certificate level in Ireland.

BACHELOR OF SCIENCE (BSc) SINGLE MAJORS - DENOMINATED ENTRY

- BSc Computer Science (DN201)

BAFS (HONS) SINGLE MAJOR – DENOMINATED ENTRY

- Actuarial and Financial Studies (DN230)

MODULE LEVEL RESTRICTIONS BY STAGE

Module Level restrictions for Honours Bachelors Degree:

To graduate with a 180 or 240 credit honours degree, the credits awarded must contain a maximum of 10 Level 0 ECTS credits, a minimum of 100 ECTS credits at Level 2 or above, of which a minimum of 40 ECTS credits must be at Level 3 or above. In other words, students must take a minimum of 60 Level 2 and 40 Level 3 credits; this leaves them with the flexibility to take 80 or 140 credits of Level 0, 1, 2, 3 or 4 modules, subject to the restrictions below, to complete a 180 or 240 credit honours degree.

MODULE LEVEL RESTRICTIONS BY STAGE (for 240 credit Honours Degree)				
	Stage 1	Stage 2	Stage 3	Stage 4
Level 0	Max.10 non-elective credits	No non-elective credits	No non-elective credits	No non-elective credits
Level 1	No restrictions	Max 20 non-elective credits	No non-elective credits	No non-elective credits
Level 2	Max 10 non-elective credits or with Programme Board approval	No restrictions	Max 20 non-elective credits	No non-elective credits
Level 3	No non-elective credits	No restrictions. Up to individual Programmes.	No restrictions	No restrictions. Up to individual Programmes
Level 4	No non-elective credits	No non-elective credits	No restrictions	No restrictions. Up to individual Programmes
Electives	No restrictions	No restrictions	No restrictions	No restrictions

Further information on Module Level Restrictions can be found at: User's Guide to General Regulations at: http://www.ucd.ie/governance/asug/ and the particular FAQ that addresses this is: Under the Modules and Credits: *'What is a level?'* [General Regulations 1.4]

INFORMATION ON MODULES GRADES

GRADE	GRADE-POINT	DESCRIPTION
A+	4.2	Excellent
A	4	
A-	3.8	
B+	3.6	Very Good
B	3.4	
B-	3.2	
C+	3	Good
C	2.8	
C-	2.6	
D+	2.4	Pass
D	2.2	
D-	2	
E	1.6	Fail
F	1.0	Fail
G	0.4	Fail
NG	0	Fail

IMPORTANT: Significant changes to the policy for the potential compensation of E grades, and the phased removal of compensation, came into effect in 2013-2014. **From the 2015-16 academic year no modules are eligible for compensation.**

STUDENT WORKLOAD

Student Workload: Student workload is the amount of time spent by students on university study, including both scheduled contact time (lectures, tutorials, laboratories, workshops, etc.) and individual (or group) study and is measured through the allocation of ECTS credits. **Where a Programme Board determines that the overall workload for a particular student in a particular semester or academic session is unsustainable, the Programme Board will require such a student to adjust their workload**.

Full-time undergraduate students will normally pursue modules equivalent to 30 ECTS credits per semester. However, to permit flexibility and facilitate student choice, a full-time undergraduate student may pursue a greater or lesser number of credits in a single semester. The academic load for a full-time student will not exceed a maximum of 40 ECTS credits or be less than a minimum of 20 ECTS credits in a given semester, or more than 70 ECTS credits, or less than 50 ECTS credits in a two-semester academic session. Permission may be given to a full-time student to register to less than 20 credits in a given semester where this is necessary to facilitate completion of a degree programme.

Note: Please be aware that Repeat and Resit attempts will result in an even greater workload and **you are strongly advised** to discuss your workload with staff in the Science Office, in advance of completing your registration.

PROGRESSION

Students with 50 and 55 credits

Under University regulations, students are entitled to progress to the next Stage carrying up to two 5 credit failed modules (10 credits in total). Within the BSc programme, the following additional progression rules apply. *A student may progress to the next Stage of a subject if they have the possibility of meeting the core and optional requirements of the uncompleted Stage through repeating or selecting modules and with the approval of the School. Module prerequisites may be waived by a School if a student is taking the appropriate Stage modules as co-requisites. A student will be provisionally accepted into a Subject under the mechanism approved by the Programme Board.*

Progression to Stage 4 Science

The satisfactory completion of the requirements of Stage 3 and **achieving a minimum GPA of 2.48** will allow a student to proceed into their allocated major in Stage 4. Students who complete Stage 3 with a GPA of 2.47 or below, will graduate with a BSc (General Science) Degree. **Students who have completed Stage 3 will not be permitted to replace or substitute modules with a view to raising their GPA**. The BSc (General Science) degree is a level 8 Honours degree. Further information can be found at: http://www.ucd.ie/governance/asug/progression/

RECOGNITION OF PRIOR LEARNING

Recognition of Prior Learning: Credit may be awarded within a programme for certificated or experiential prior learning, achieved outside of that programme. This credit will, subject to the approval of the Programme Board, count towards progression and programme credit accumulation requirements. If you would like to have prior learning recognised to count towards your UCD programme you can find more information and the application form on the following link: http://www.ucd.ie/governance/resources/policypage-rplpolicy/ and you can find the Guide for Applicants at: http://www.ucd.ie/t4cms/rplstudents_g.pdf

An application for RPL should be made **as early as possible** and preferably before you commence the relevant module/stage/programme. An application for RPL **relating to a particular module** should be submitted before the third week of the semester in which it is offered. Applications made after this date will only be accepted at the discretion of the Programme Board. If you submit an RPL application relating to a particular module(s) **after the module(s) has commenced** you should register for, attend and participate in the module(s) until you are informed of the decision of the Programme Board. If your application is not successful, you are responsible for all assessments associated with the module(s). **Incomplete applications will not be accepted**. It is your responsibility as an applicant to ensure you supply all necessary supporting evidence and documentation and sign the form as required.

POLICY ON UNDERGRADUATE CONTINUATION

The Undergraduate Continuation Policy will seek in the first instance to identify timely interventions to ensure that students complete their programme. Following a number of interventions and supports, it will be up to the Science Taught Programme Board to propose to the University Programmes Board (UPB) that a student's registration be cancelled. Students at risk will be identified using the following criteria:

- Poor attendance record
- Lack of engagement
- Failure to make sufficient and timely academic progress
- Repeated failure of examinations
- Failure to meet continuous assessment deadlines
- Failure to meet programme requirements
- Failure to fulfill academic obligations

Students who meet some or all of these criteria over four consecutive semesters, despite the interventions described below, will be referred to the UPB for exclusion from their Programme. Interventions will be made after the Programme Examination Board for each of the four successive semesters in question.

Intervention 1

- Students at risk will be identified at the Programme Exam Board. These students will be formally notified of concern about their academic performance. This communication will be scheduled during the first four weeks of term. Students will be informed that their progress is being monitored and that continued dis-engagement could result in their removal from the programme should their engagement not improve over the subsequent three semesters. Students will be made aware of the range of academic support services available to them. Students will be advised that if they wish to make an appointment to meet with the Chair of the Science Programme Board (or his nominee) to discuss their performance this will be arranged.

Intervention 2

- Again students will be formally notified that the Programme Exam Board has considered their results and engagement and has found them in breach of the continuation policy. Students will be given the opportunity to explain their performance and will be given guidance on the repeat/resit process.

Intervention 3

- Students will be notified that their performance has been deemed non-satisfactory by the Programme Exam Board and that they are now in danger of removal from their programme. A meeting with the Chair of the Science Programme Board (or nominee) will be arranged where students will be asked to explain/consider their performance on their programme.

Intervention 4

- Students will be informed that the Programme Exam Board has approved the recommendation of their removal from the programme. Students will be given a period to appeal this outcome and to provide a reasonable explanation to the Board.

If students do not engage with, or respond to formal communications sent to them, the process will continue and the lack of response will be noted in the School's supporting evidence sent to UPB.

For full details on the Continuation and Readmission policy consult the following link:
https://sisweb.ucd.ie/usis/!W_HU_MENU.P_PUBLISH?p_tag=GD-DOCLAND&ID=153

FITNESS TO CONTINUE TO STUDY

A concern may arise because Faculty, staff or others consider that a students' health, behaviour or actions may constitute a risk to the learning, working, or living experience of themselves or others. The University has a duty to ensure that a student is fit to continue to study while undertaking education and training.
The objectives of this policy are to:

- Identify and support students whose behaviour, capacity, welfare or wellbeing are of concern to themselves or others, or whose behaviour or actions are impacting adversely on, or pose a risk to, the learning, working, or living experiences of themselves or others;
- Guide students who experience issues that may affect their Fitness to Continue in Study;
- Provide a suitable framework for the effective, consistent and timely identification and management of Fitness to Continue in Study issues that may arise;
- Protect the student, staff, faculty, placement providers, the University, and the public;
- Treat concerns regarding student Fitness to Continue in Study seriously and as quickly as possible.

Level 1: Informal procedure for Initial Response and Support at Local Level
Initial response and support may comprise informal action or actions that aim to support students and to resolve the emerging concerns locally, at module, school or programme level, under this informal procedure (Level 1). An initial response may include a recommendation that the student be provided with, and/or be encouraged to avail of, and be made aware of all the supports available to them. The purpose of the initial response and support is to resolve any concerns by reaching agreement with the student on recommended actions. The student shall be notified in writing of agreed actions, timeframes or review periods (i.e. an action plan).
If the concern is not resolved or persists, the case will be referred to the Programme Board, along with supporting documentation, for escalation to Level 2 intervention.

Level 2: Procedures for Programme Board Review
The Chair of the Programme Board will decide if a case review should take place.
If it is decided that a case review should take place, the Chair convenes a Fitness to Continue in Study Panel to conduct a case review to consider reported Fitness to Continue in Study concerns and the initial response and support provided at Level 1.

- Students shall be informed in writing that the Level 2 procedure has been initiated and that the Panel has been convened.
- The Chair may seek further information or professional advice before considering any further action. This may include medical and/or psychological assessment, which shall not be at the expense of the student. The assessment shall be undertaken by an appropriately qualified person and currently working in the area, without a conflict of interest, and unrelated to and independent of the student.
- The student will be invited to, and given a minimum of 10 working days notice of the date of, the meeting.
- A copy of any relevant documentation that has been supplied in respect of the case will be provided to the student in advance of the meeting. The student shall be invited to make their own written submission in advance of the meeting.
- A student can be accompanied to the meeting by a friend, parent, student adviser, or Students' Union representative if they wish.
- If a student does not respond to the meeting notification and cannot or does not attend the meeting, the meeting will proceed in their absence.
- At the review meeting the student will be given the opportunity to respond to any concerns raised.
- The decision of the Committee will be taken by a simple majority.
- A record of the proceedings will be made.

The Programme Board may:

- Decide that the case should be dismissed with no further action and the student is recommended to continue in study;
- Decide that the student should be allowed to continue, subject to review under certain specified conditions, such as careful mentoring by a member of faculty at the grade of Associate Professor or above;
- Decide that the student should be required to complete specific actions in a specified and reasonable time frame to demonstrate their fitness to continue in study (e.g. undertake an action plan to resolve a specific concern);
- Recommend the student should take a leave of absence from studies for an agreed period to concentrate on their wellbeing and/or to resolve any specific concern.
- Recommend that the student avail of an exit award
- Recommend that the student voluntarily withdraw
- Consider that the student has not achieved the terms of a specified action plan, and / or is deemed not fit to continue in study, and refer the case to Level 3

Level 3: Procedures for University Fitness to Continue in Study Review

When agreement or resolution is not reached at Level 2, and/or the student does not engage with Level 2 procedures and/or the action plan, and/or where a decision is appealed, the case may be referred to ACCSCC. The University Fitness to Continue in Study Committee (Level 3) meetings may result in any of the outcomes available at Level 2. In addition the Committee may:

- Suspend a student who fails to comply with a medical assessment requirement until they are certified by an appropriately qualified person currently working in the area, without a conflict of interest, and unrelated to and independent of the student.
- Add to the Governing Board's support and action plan, setting defined timeframes for review of a student's fitness to continue in study.
- Direct that the student take a Leave of Absence from studies for a specified period to concentrate on their wellbeing and, subject to review and approval at the end of that period by the Dean of Students or nominee, return to study (see section 10 below);
- Direct that the student is required to withdraw from the programme, or is permanently excluded from the programme or the University.

Please consult the following link to view the full policy:
https://sisweb.ucd.ie/usis/!W_HU_MENU.P_PUBLISH?p_tag=GD-DOCLAND&ID=154

GENERAL REGULATIONS

The Academic Regulations are a set of rules governing the University's educational offerings. They are supported by academic policy, procedures and guidelines, and the User's Guide to the General Regulations. All students are expected to adhere to the General Regulations of the University. For full details please view: http://www.ucd.ie/governance/resources/policypage-academicregulations/ or view the User's Guide to General Regulations at: http://www.ucd.ie/governance/asug/

Degree GPA

The final degree GPA is based 70% on the final Stage and 30% on the penultimate Stage. For a 240 credit (four Stage) degree it is 70:30 based on Stage 4: Stage 3. Students who graduate with a 180 credit (3 Stage) BSc (General Sciences) Degree will have their degree GPA based 70% on Stage 3 and 30% on Stage 2.

http://www.ucd.ie/science/study/currentundergraduatesciencestudents/degreegpacalculation/

In the BAFS programme the final degree GPA is calculated on the unweighted GPAs of the final and penultimate stages of the programme and based on modules, including elective modules, that the student completes and passes to satisfy the credit requirements of those stages.

REPEATS AND RESITS IN UNDERGRADUATE SCIENCE PROGRAMMES

If you do not pass a module, what can you do?

Remediation: A School decides on the remediation opportunities for its modules, as it deems appropriate. The method of remediation for each module can be found online in the relevant Module Descriptor but will comprise some combination of the following:

- **Repeat** the module when it is next offered. A grade of D- or better awarded for a repeat attempt at a module carries a grade point of 2.0, irrespective of the actual grade awarded.
- **Resit the assessment** for that module, if a resit is offered in the next semester. The resit assessment will be graded as pass (PR), fail (FR) or no grade (NG) with a grade point of 2.0 for a pass. The resit may be a single terminal examination and/or may require the submission of coursework or other assessment tasks during the semester. You should always seek advice from the Science Office and the School involved if you find yourself in this position.
- **Substitute another module** compatible with the credit requirements of the programme.

Students are permitted to substitute a new module for a failed option or elective module. When a student chooses this course of action, they are considered to be attempting this for the first time and the full grade point is awarded. This option will incur fees for the full cost of the new module. Students resitting or repeating modules incur a considerably reduced fee. Information on Repeats and Resits is available on the Assessment website at: http://www.ucd.ie/students/resitsrepeats.html

Repeat Students: In a certain number of cases you may have earned insufficient credits (less than 50) to progress into the next Stage of your degree. In this situation you can return in the next academic year to complete the requirements for the Stage and potentially take some modules for the Stage that you plan to progress into. All students in a repeat Stage should meet with a member of staff in the Science Office at the start of the academic year for advice on their registration/enrolment and the options open to them for that year. More detailed information for students in a repeat attempt at a specific stage can be found in the relevant section in Stages 1-4 and on:
http://www.ucd.ie/students/assessment/index.html *(See information on Assessment under Guidelines & Policies)*

Science Stage 1

SCIENCE (DN200)

BIOLOGICAL, BIOMEDICAL & BIOMOLECULAR SCIENCE (DN200BBB)

CHEMISTRY & CHEMICAL SCIENCES (DN200CCS)

MATHEMATICAL, PHYSICAL & GEOLOGICAL SCIENCES (DN200MPG)

COMPUTER SCIENCE (DN201)

BACHELOR OF ACTUARIAL & FINANCIAL STUDIES (DN230)

SCIENCE STAGE 1 SUBJECT STREAMS (DN200)

You have chosen one of four streams within DN200 depending on your scientific interests. By choosing a stream, you can tailor your study plan to focus on a particular area or sample more widely to explore your interests. UCD Horizons enhances the subject choice available, so that of your 12 modules, two may be selected from other disciplines (e.g. languages) as electives. You may change your stream by informing the staff in the Science Office before the registration process closes at 5pm on 21st September 2018.

- UCD Science (DN200) is a single point of entry for 26 **separate degree subjects**. The pathways, from the point of entry to graduation, for each of these subjects are described in the UCD Science prospectus which can be found at http://www.ucd.ie/t4cms/ucdscience.pdf
- The course in **Stage 1 (first year)** is divided into 12 modules. Students choose their modules in order to fulfil the first year requirements for the subjects that interest them most. Students can either focus on a particular area, but must fulfil the requirements for at least 2 subjects, or choose to cover the core requirements for a wide range of subjects (including subjects from different streams). There is no competition for places in Stage 1; students are guaranteed their subjects of choice.
- In **Stage 2 (second year)** students cover the requirements for **a minimum of 2 or 3 subjects**. Due to timetable and workload constraints not all combinations of subjects are possible in Stage 2 – but almost all combinations are possible within each of the BBB, CCS and MPG subject streams, and students can also combine Stage 2 subjects across subject streams. The choice of Stage 2 subjects that can be combined depends on the number of core modules shared between those subjects and the extent to which other requirements have been met in Stage 1. Students can study any subject in Stage 2 for which they have met the Stage 1 requirements; you are guaranteed any subject in Stage 2 that you are qualified to take.
- In **Stage 3 (third year) and Stage 4 (fourth year)** students study one of their Stage 2 subjects to degree level and this subject is their degree major. The selection of degree major may be competitive**.** In previous academic years 98% of students who completed Stage 2 got their first choice of degree major in Stage 3. There are a limited number of joint-major degrees available.

DN200 No preference

You have chosen to keep your options open. You are advised to use Science Programme literature to choose modules that will allow you to sample from areas that interest you, while ensuring that you fulfil the requirements for subjects you may wish to study in later Stages. Some modules that are required for a specific subject may be deferred to second year (Stage 2) to increase your range of options in first year (Stage 1) or to allow you to take introductory modules. **Be aware that if you defer too many modules to Stage 2 (e.g. Programme Cores – see Table 2), you may restrict your choice of degree subjects**.

The Mathematics modules have been designed to meet the needs of different subjects. Please ensure that you are taking the appropriate set of Mathematics modules. Further advice is contained within each subject area, DN200BBB, DN200CCS and DN200MPG.

DN200 BBB – Biological, Biomedical & Biomolecular Sciences

You have chosen to focus your studies on the Biological, Biomedical and Biomolecular disciplines. This will lead to a degree in one of the following subjects

- Biochemistry & Molecular Biology
- Cell & Molecular Biology
- Environmental Biology
- Genetics
- Microbiology
- Mathematics, Biology & Education
- Pharmacology
- Physiology
- Plant Biology
- Neuroscience
- Zoology

There are a number of modules you must take to continue studying in this area (Table 2 Page 32). In addition to Biology, you must complete two modules of Mathematics and a module of Chemistry. You are not limited to these subjects. You may choose modules from other areas to widen the subject choices available to you.

If you are sure of your interest in Biological disciplines, we recommend that you take additional modules in first year (Stage 1) that are required for your degree (Programme Cores – see Table 2 Page 32) or select

modules that deepen your knowledge in this area. **If you defer too many Programme Cores, this may limit some of your options in Stage 2.** If you are interested in keeping your options open regarding pursuing a degree in the Chemical, Mathematical, Physical or Geological Sciences you should carefully read the DN200 CCS and DN200 MPG sections and seek academic advice if necessary, e.g. by contacting science@ucd.ie.

DN200 CCS – Chemistry & Chemical Sciences

You have chosen to focus your studies on the Chemical Sciences. This will lead to a degree in one of the following subjects:

- Chemistry,
- Medicinal Chemistry & Chemical Biology
- Chemistry with Biophysical Chemistry
- Chemistry with Environmental & Sustainable Chemistry
- Mathematics, Chemistry & Education

There are a number of modules you must take to continue studying in these areas (Table 2 - Page 32). In addition to Chemistry, you must complete two modules of Mathematics and may be required to take a module in Biology. You are not limited to these subjects. You may choose modules from other areas to widen the choices available to you.

If you are sure of your interest in Chemistry and Chemical Sciences, we recommend you take additional modules in first year (Stage 1) that are required for your degree (Programme Cores – see Table 2- Page 32) or select modules that deepen your knowledge in this area. **If you defer too many Programme Cores, this may limit some of your options in Stage 2**. If you are not required to take CHEM00010, seek academic advice as you could consider taking CHEM20080 in Semester 1.

If you are interested in keeping your options open regarding pursuing a degree in the Biological, Mathematical, Physical or Geological Sciences you should carefully read the DN200 BBB and DN200 MPG sections and seek academic advice if necessary, e.g. by contacting science@ucd.ie.

DN200 MPG – Mathematical, Physical & Geological Sciences

You have chosen to focus your studies on the Mathematical and/or Physical and/or Geological Sciences. This will lead to a degree in one of the following subjects:

- Geology
- Physics
- Physics with Astronomy & Space Science
- Theoretical Physics
- Mathematics, Applied Mathematics & Education
- Applied & Computational Mathematics
- Statistics
- Mathematics
- Mathematics, Physics and Education
- Financial Mathematics

Each subject has specific modules that you are required to take to progress in this area, although a number of modules are common to all subjects (Table 2- Page 32). Some of these modules may be deferred to second year (Stage 2) if you wish to explore your interests in other subjects within this area or more broadly within Science or if you are required to take introductory modules. You are not limited to these subjects. You may choose modules from other areas to widen the choices available to you.

If you are sure of your interest in these subjects, we recommend you select additional modules in first year (Stage 1) that are required for your degree (Programme Cores – see Table 2 – Page 32) or select modules that deepen your knowledge in this area. **If you defer too many Programme Cores, this may limit some of your options in Stage 2**. If you have an interest in studying Geology beyond first year, you are recommended to take GEOL 10030.

You should note that the requirement for Mathematics within DN200 MPG varies and you should make sure that you are taking the correct set of Mathematics modules for your chosen subjects. Please seek academic advice to confirm your choices if you are in any doubt**.**

If you are interested in keeping your options open regarding pursuing a degree in the Biological or Chemical Sciences you should carefully read the DN200 BBB and DN200 CCS sections and seek academic advice if necessary, e.g. by contacting science@ucd.ie.

MATHEMATICS, SCIENCE AND EDUCATION

The Mathematics, Science and Education Programme is a five-year programme, consisting of a four-year BSc in Science (Applied Mathematics, Biology, Chemistry or Physics), Mathematics and Education followed by a one-year MSc in Mathematics and Science Education. On successful completion of the five years of the programme, you are fully qualified to teach Mathematics and either Applied Mathematics, Biology, Chemistry or Physics to Higher Leaving Certificate Level in an Irish post-primary school. If your chosen Science specialisation is Biology, Chemistry or Physics you are also fully qualified to teach Science to Junior Certificate Level. The five-year programme has been approved by the Irish Teaching Council.

The aim behind this programme is that you will not only become a scientist or mathematician, but also a teacher, and throughout the five years of study you will be encouraged to develop this dual identity. To this end, the programme offers you the opportunity to study Science and Mathematics along with Education in an integrated manner. Another key feature of the programme is that in keeping with the flexible structure of DN200 Science, it has also been designed to enable you to explore and "taste" some Education modules in Stages 1 and 2, allowing you to make an informed decision about whether to pursue a teaching career. Therefore in Stages 1 and 2 while the focus of your studies will be Science and Mathematics, you will have the opportunity to take one Education module in Stage 1 (with a short primary-school placement) and two Education modules in Stage 2 (with a short post-primary school placement). If your aim is to become a Biology, Chemistry or Physics teacher, then to ensure a well-rounded Science education, you must take at least 10 ECTS credits in all three of these subjects during the first three years of the programme.

Should you choose to study Mathematics and Science Education in Stage 3 you will take four Education modules, two of which involve teaching placements - one in a post-primary school and one as a university tutor. At the end of Stage 4, subject to receiving a grade point average (GPA) of 3.08 (equivalent to a 2nd Class Honours degree "a 2:1") you will have direct entry to the one-year MSc in Mathematics and Science Education.

While you will continue some study of Mathematics and Science in Stages 4, Education will be the primary focus of Stages 4 and 5, with a significant placement component. Specifically you will be assigned two year-long placements at two different post-primary schools. These placements are designed so that you will not only obtain teaching experience, but also gain a whole-school experience through participating in parent-teacher meetings, timetabling and other school matters. Over the course of the two years you will also develop a Professional Practice Portfolio, and in Stage 5, you will undertake a professional dissertation.

CHOOSING MODULES IN STAGE 1

- During Orientation Week, academic staff from the Science Office and disciplines will be available to assist you in choosing your modules and in completing your registration.

- All full-time students are required to study twelve modules in a year – it is recommended that you study six modules in each semester. The maximum number permitted in a semester is eight. At least ten of your Stage 1 modules must be from within Science (listed in Table 1 on Page 31). You may take up to two non-science elective modules in Stage 1. You are advised to consider your choice of elective modules carefully, for example considering possible Structured Electives or degree Minors. You may also take your electives from within the Science Programme.

- Students are **guaranteed their subjects of choice in Stage 1** and, when in Stage 2, can study any subjects that they are qualified to take and for which the required modules can be combined and timetabled.

- You must take at least two Mathematics modules during Stage 1. Note that the requirements listed in Table 2 represent the minimum level of Mathematics required, but that alternative higher level modules may be available (see Mathematics information on page 29-30 for further information).

- The wide variety of Science modules available in Stage 1, shown in Table 1, allows you to sample and experience a number of subjects, while also studying the core modules required for your discipline. The choices you make in first year will have a bearing on your final degree subject(s). Make sure that you meet the core requirements for your subject of choice and **consider taking Programme Cores (Table 2 Page 32) to reduce restrictions on your Stage 2 choices**. The Level 0 and Level 1 modules required for entry to the degrees in the various subject areas are listed in Table 2.

- Science laboratory and tutorial times will be automatically allocated at the start of term after you register online to your preferred area and your optional Science modules. Once the allocation to practicals and tutorials has been made, usually during the first week of term you will be able to see and print your individual timetable.

- It is possible to take a joint degree combining two subjects, subject to the agreement of the two disciplines concerned. The range of joint degrees available is limited and you should seek academic advice from the relevant subjects and further information from the Science Office if you wish to pursue this possibility.

INFORMATION RELATING TO PARTICULAR SUBJECTS IN STAGE 1

Mathematics

Students are required to take at least two modules in Mathematics (Linear Algebra and Calculus) during their degree in UCD. Mathematics teaching has been tailored to meet the requirements of different programmes. However, Mathematics is fundamental to many disciplines of modern Biology and Chemistry and you should consider studying Mathematics to the level of your ability. You can sample the Mathematics for Physical or Mathematical Sciences modules and if you find them too challenging, you can move to Mathematics for the Sciences in the first weeks of the semester without affecting your ability to complete the modules. Students must take one Mathematics module in Semester 1. If a student is required to do MATH 00010 then their Linear Algebra module must be deferred until 2nd year (Stage 2). If you are interested in pursuing your studies in Mathematics to a higher level you should seek academic advice in relation to the Mathematics modules you should study.

Mathematics Requirements

	Subjects/Areas	Mathematics Topics		Comment (to substitute Mathematics modules, you must go to the Science Office)
		Linear Algebra	**Calculus**	
1	Biological Biomedical and Biomolecular (excluding Education), Chemistry and Chemical Sciences (excluding Education), Geology	MATH10290	MATH10310	MATH10340 can be taken instead of MATH10290 if students want to keep Mathematical and Physical Science subjects open. MATH10350 can be taken instead of MATH10310 if students want to keep the Education degrees or Mathematical and Physical Science subjects open.
2	Mathematics, Biology &Education, Mathematics, Chemistry & Education	MATH10290	MATH10350	MATH10340 can be taken instead of MATH10290 if students want to keep Mathematical and Physical Science subjects open. MATH10350 also fulfills the requirements for all BBB, CCS and Geology subjects (see above).
3	Physics, Theoretical Physics, Physics with Astronomy and Space Science, Mathematics, Physics & Education, Mathematics, Applied and Computational Mathematics, Financial Mathematics Statistics, Mathematics, Applied Mathematics & Education	MATH10340	MATH10350	Students who have not attained at least a 02 or H5 in Leaving Certificate Mathematics (or equivalent) are strongly advised to consult with either the School of Physics or the School of Mathematics & Statistics – depending on their main area of interest.

Science, Mathematics and Education Degrees

The Science, Mathematics and Education Programme is a five-year programme, consisting of a four-year BSc in Science, Mathematics and Education, followed by a one-year MSc in Mathematics and Science Education. On successful completion of the five years of the programme, you are fully qualified to teach Mathematics and either Applied Mathematics, Biology, Chemistry or Physics to Higher Leaving Certificate Level in an Irish post-primary school. If your chosen Science specialisation is Biology, Chemistry or Physics you are also fully qualified to teach Science to Junior Certificate Level.

To meet Teaching Council approval to teach Applied Mathematics, Biology, Chemistry, Mathematics or Physics to Higher Leaving Certificate Level, you must study a minimum 60 ECTS credits of your chosen subject at third level. The Teaching Council places additional conditions on the areas of study for each subject, and the number of modules studied which must be at level 3 or above. The Teaching Council criteria also state that a prospective teacher of Biology, Chemistry or Physics must complete a minimum 10 ECTS credits in each of Biology, Chemistry and Physics in order to qualify to teach Science to Junior Certificate Level. The five-year Mathematics and Science Education Programme has received accreditation from the Teaching Council for each of its pathways and you are a fully qualified teacher on graduation from the five-year programme.

TABLE 1. SCIENCE MODULES AVAILABLE IN FIRST YEAR (STAGE 1).

Semester 1	Semester 2
Project Module (Core for all First Year Students in DN200	
SCI10010 Scientific Enquiry	
Biological, Biomedical & Biomolecular Modules	
BIOL00010 Fundamentals of Biology	***BIOL10110 Cell Biology & Genetics***
BIOL10130 Biology in Action	**BMOL10030 Biomedical Sciences**
BIOL10140 Life on Earth	
Chemistry Modules	
CHEM00010 Introductory Chemistry	***CHEM10050 Basis of Organic & Biological Chemistry***
CHEM10040 The Molecular World	**CHEM10100 Medicinal Chemistry**
CHEM20080 Basis of Physical Chemistry	
Geology Modules	
	GEOL10020 Earth Science & Materials
GEOL10060 Introduction to Earth Sciences ¥	**GEOL10050 Earth & Humanity ¥**
	GEOL10030 Field Geology (Level 1)
	GEOL10040 Earth, Env & Society
	GEOL10060 Introduction to Earth Sciences ¥
Mathematics Modules for Biological, Chemistry and Geological Sciences ‡	
MATH00010 Introduction to Mathematics	***MATH10310 Calculus for Science***
MATH10290 Linear Algebra for Science ±	
Physics Modules	
PHYC10070 Foundations of Physics	***PHYC10080 Frontiers of Physics***
PHYC10050 Astronomy & Space Science	**PHYC20030 Thermal Physics**
PHYC10210 Quanta, Particles & Relativity	
PHYC20080 Fields, Waves & Light	
Applied & Computational Mathematics Modules	
ACM10080 App Maths: Mechs & Methods	***ACM10060 Appl of Differential Equations***
ACM10090 Climate Change: Causes & Consequences	**ACM10070 Math Modelling in the Sciences**
Mathematics Modules for Mathematical & Physical Sciences	
MATH00010 Introduction to Mathematics	***MATH10350 Calculus for Mathematical & Physical Sciences***
MATH10340 Linear Algebra for Mathematical & Physical Sciences ±	**MATH10320 Mathematical Analysis**
MATH10040 Numbers and Functions	
Mathematics Education Module	
	MATH10410 Introduction to Mathematics Pedagogy
Statistics Modules	
STAT10010 Research Methods	***STAT10060 Statistical Modelling***
STAT10050 Practical Statistics ¥	**STAT10050 Practical Statistics ¥**

‡ Students who also want to be eligible for a Mathematical or Physics subject in Stage 2, in addition to a Biological, Chemistry or Geological subject, must take the Mathematic modules for Mathematical and Physical Sciences instead.

¥ This module is offered in both Semester 1 and Semester 2.

± This module may be deferred until Stage 2 if student has to take MATH00010 in Stage 1 (see Table 3 Page 33)

Bold Italics Core modules for a particular subject that must be taken in first year (unless otherwise stated)

Italics Conditional Cores. Modules that may need to be taken in Semester 1 of first year, depending on results of Leaving Certificate results or equivalent qualifications (see Table 3 Page 33).

Table 2. Modules required for B.Sc. Degrees within Science (DN200)

Degrees	Conditional Core Modules that may be required (*Please see Table 3)*	Core Modules that must be taken in Stage 1 (see footnote)	Programme Cores: Compulsory Modules that students may choose to take in either Stage 1 or Stage 2
BIOLOGICAL, BIOMEDICAL & BIOMOLECULAR SCIENCES (BBB)			
Biochemistry & Molecular Biology, **Cell & Molecular Biology** **Environmental Biology** **Genetics** **Microbiology** **Neuroscience** **Pharmacology** **Physiology** **Plant Biology** **Zoology**	BIOL00010 CHEM00010 MATH00010 PHYC10070 (only a conditional core for Neuroscience and Physiology)	**SCI10010** **BIOL10110** **CHEM10050** **MATH 10290*, MATH10310***	At least two of : BIOL10130 BIOL10140 BMOL10030
Mathematics, Biology & Education	BIOL00010 CHEM00010 PHYC10070	SCI10010 BIOL10110 CHEM10050 MATH10290*, MATH10350 MATH10410 STAT10060	BIOL10130 BIOL10140 BMOL10030
CHEMISTRY & CHEMICAL SCIENCES (CCS)			
Chemistry, **Chemistry with Biophysical Chemistry,** **Chemistry with Environmental and Sustainable Chemistry,** **Medicinal Chemistry and Chemical Biology**	CHEM00010 MATH00010 BIOL00010 (only a conditional core for Biophysical Chemistry & Medicinal Chemistry)	**SCI10010** **CHEM10050** **MATH10290*, MATH10310*** BIOL10110 (only a core for Biophysical Chemistry & Medicinal Chemistry)	CHEM 20080
Mathematics, Chemistry & Education	BIOL00010 CHEM00010 PHYC10070	SCI10010 CHEM10050 MATH10290*, MATH10350 MATH10410 STAT10060	CHEM 20080
MATHEMATICAL, PHYSICAL & GEOLOGICAL SCIENCES (MPG)			
Geology	MATH00010	SCI10010 **GEOL 10020***,** **GEOL10060***** MATH10290*, MATH10310*	
Physics, **Physics with Astronomy & Space Science,** **Theoretical Physics**	ACM10080 MATH00010 PHYC10070	**SCI10010** **PHYC10080** **MATH 10340, MATH10350**	ACM10060** PHYC10050** PHYC20030, PHYC20080**
Mathematics, Physics & Education	ACM10080 BIOL00010 CHEM00010 PHYC10070	SCI10010 **PHYC10080** MATH10340, MATH10350 MATH10410 ACM10060 STAT10060	MATH10320 PHYC20030 PHYC20080**
Applied and Computational Mathematics, **Mathematics,** **Financial Mathematics** **Statistics**	ACM10080 (*only required for Applied and Computational Mathematics*)	**SCI10010** **ACM10060** **MATH10340, MATH 10350** **STAT 10060**	MATH10040, MATH10320 (Mathematics & Financial Maths) MATH10320(*only required for Applied and Computational Mathematics*) ECON10720 (Financial Maths)
Mathematics, Applied Mathematics & Education	ACM10080	SCI10010 ACM10060 MATH 10340, MATH10350, MATH10410 STAT10060	MATH10040 MATH10320

Footnotes for Table 2:

The modules highlighted in red text constitute all of the compulsory modules for any subject in BBB and CCS except for the education pathways (note also Conditional Cores and Programme Cores).
The modules highlighted in purple text constitute all of the compulsory modules for any subject in MPG except for the education pathways (note also Conditional Cores and Programme Cores).

* The following should be noted for the MATH10290 and MATH10310 modules:
    Students required to take MATH10290 can take MATH10340 instead.
    Students required to take MATH10310 can take MATH10350 instead.
    Students required to take MATH00010 must defer MATH10290 or MATH10340 until Stage 2.
** The following should be noted for students following one of the Physics Degrees:
    PHYC10050 must be taken in either Stage 1 or Stage 2 for Physics with Astronomy and Space Science. In order to take PHYC20080 in Stage 1, students must have attained a minimum grade of H3 in Higher Leaving Certificate Physics (A level; Grade B) AND a minimum grade of H3 in Higher Leaving Certificate Mathematics (A level; Grade B).
*** To be eligible to take a degree in Geology, students must take GEOL10060 and GEOL10020 in Stage 1.

Conditional Core Modules

Some students may not have a sufficiently strong background in a subject and may be required to take an introductory module in the subject before they can take more advanced modules. Table 3 outlines the specific "prior learning" requirements associated with these modules.

Table 3. Prior Learning requirements for Conditional Cores

Relevant Leaving Certificate Subject	Requirement (Conditional Core Module)	Rule
Applied Mathematics	ACM10080 Applied Mathematics, Methods & Applications	For the degrees where ACM10080 appears as a Conditional Core module in Table 2, students must take ACM10080 and/or have attained a minimum grade H5 in Leaving Certificate Higher Applied Mathematics (A Level; Grade C).
Biology	BIOL00010 Fundamentals of Biology	To take BIOL10110 students must have taken BIOL00010 or attained a minimum grade O2 or H5 in Leaving Certificate Biology (A Level; Grade C). BIOL00010 is also recommended for students taking BIOL10130 and BIOL10140 who haven't achieved a O2 or H5 in Leaving Certificate Biology.
Chemistry	CHEM00010 Introductory Chemistry	To take CHEM10050, students must have taken CHEM00010 or have attained a minimum grade O1 or H5 in Leaving Certificate Chemistry (A Level; Grade C).
Mathematics	MATH00010 Introductory Mathematics	Students who did not achieve a minimum grade 02 or H5 Leaving Certificate Mathematics (GCSE; Grade A, A Level; Grade D) must take MATH00010 in addition to other required Mathematics modules.
Physics	PHYC10070 Foundations of Physics	To take PHYC10080 students must have taken PHYC10070 and/or attained a minimum grade of H5 in Higher Leaving Certificate Physics (A Level; Grade C). However, PHYC10070 is recommended for all students interested in pursuing further studies in Physics, Physics with Astronomy & Space Science and Theoretical Physics.

PROGRESSION FOR BSC SCIENCE STUDENTS

Students entering Stage 2 science must select a minimum of **two** subjects. If both of those subjects are selected from among Pharmacology, Neuroscience, Physiology and Genetics, however, students **must choose an additional subject** that is not in that list. Subject selection takes place online during July 2018.

The subjects available to you depend on the modules that you have attempted in Stage 1. When you select your subjects you will be pre-enrolled to the relevant core modules for Stage 2. You will be able to select your remaining modules when module registration opens in August 2018.

STUDENTS WITH 50 and 55 STAGE 1 CREDITS

Under University regulations, students are entitled to progress to the next Stage carrying up to two 5 credit failed modules (10 credits in total). Within the BSc programme, the following additional progression rules apply.

A student may progress to the next Stage of a subject if they have the possibility of meeting the core and optional requirements of the uncompleted Stage through repeating or selecting modules and with the approval of the School. Module prerequisites may be waived by a School if a student is taking the appropriate Stage modules as co-requisites. A student will be provisionally accepted into a Subject under the mechanism approved by the Programme Board.

STAGE 1 REPEAT STUDENTS

Students returning to a repeat attempt at Stage 1 will find information on how to register to resits and repeats, via the Resit/Repeat/Substitution tab on the Current Students website at: http://www.ucd.ie/students/resits_repeats/. Students considering a module substitution should note the pre-requisite requirements for their preferred subject areas in Stage 2. Details of the modules required in Stage 1, in order to progress to a subject area in Stage 2, can be found by **consulting Table 2 on Page 32.**

Students should note the costs associated with the substitution of a module. Further information on these fees can be found at www.ucd.ie/fees

Students in a repeat attempt at Stage 1 have the opportunity to select modules from their next stage (via the 'Next Stage' tab in their SIS screen). The ability to take these modules can depend on a number of factors including whether these next stage modules will fit into the timetable for the modules required to complete their repeat stage. Other issues that need to be considered are pre-requisites and capacity.

STAGE 1 SUBJECTS IN SCIENCE

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following links:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 Programmes tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. DN200 Science
5. In the introductory text (2nd last paragraph) click on the following : **in the list of undergraduate Science degrees**
6. Scroll down to Programme Information – select the subject you wish to view

Stage 1 Subjects

DN200 BBB – Biological, Biomedical and Biomolecular Sciences

If you choose to focus your studies on the Biological, Biomedical and Biomolecular disciplines this will lead to a degree in one of the following subjects:

- Biochemistry & Molecular Biology
- Cell and Molecular Biology
- Environmental Biology
- Genetics
- Microbiology
- Pharmacology
- Physiology
- Plant Biology
- Neuroscience
- Zoology
- Mathematics, Biology and Education

There are a number of modules you must take to continue studying in this area **(see Table 2 page 32**). In addition to Biology, you must complete two modules of Mathematics and a module of Chemistry. You are not limited to these subjects. You may choose modules from other areas to widen the choices available to you. If you are sure of your interest in Biological disciplines, we recommend that you take additional modules in Stage 1 that are required for your degree **(Programme Cores – see Table 2 page 32)** or select modules that deepen your knowledge in this area. If you defer too many Programme Cores, this may limit some of your options in Stage 2.

DN200 CCS – Chemistry and Chemical Sciences

You have chosen to focus your studies on the Chemical Sciences. This will lead to a degree in one of the following subjects:

- Chemistry
- Medicinal Chemistry and Chemical Biology
- Chemistry with Biophysical Chemistry
- Chemistry with Environmental & Sustainable Chemistry
- Mathematics, Chemistry and Education

There are a number of modules you must take to continue studying in these areas (see Table 2 page 32). In addition to Chemistry, you must complete two modules of Mathematics and may be required to take a module in Biology. You are not limited to these subjects. You may choose modules from other areas to widen the choices available to you. If you are sure of your interest in Chemistry and Chemical Sciences, we recommend you take additional modules in first year (Stage 1) that are required for your degree (Programme Cores – see Table 2 page 32) or select modules that deepen your knowledge in this area. If you defer too many Programme Cores, this may limit some of your options in Stage 2. If you are not required to take CHEM00010, seek academic advice as you could consider taking CHEM20080 in Semester 1. If you are interested in keeping your options open regarding pursuing a degree in the Biological, Mathematical, Physical or Geological Sciences you should carefully read the DN200 BBB and DN200 MPG sections and seek academic advice if necessary, e.g. by contacting science@ucd.ie

DN200 MPG – Mathematical, Physical and Geological Sciences

You have chosen to focus your studies on the Mathematical and/or Physical and/or Geological Sciences. This will lead to a degree in one of the following subjects:

Geology	Statistics
Physics	Mathematics
Physics with Astronomy & Space Science	Financial Mathematics
Theoretical Physics	Mathematics, Physics & Education
Applied & Computational Mathematics	Mathematics, Applied Maths and Education

Each subject has specific modules that you are required to take to progress in this area, although a number of modules are common to all subjects (Table 2 see Table 2 page 32). Some of these modules may be deferred to second year (Stage 2) if you wish to explore your interests in other subjects within this area or more broadly within Science or if you are required to take introductory modules. You are not limited to these subjects. You may choose modules from other areas to widen the choices available to you. If you are sure of your interest in these subjects, we recommend you select additional modules in first year (Stage 1) that are required for your degree (Programme Cores – see Table 2 see Table 2 page 32) or select modules that deepen your knowledge in this area. If you defer too many Programme Cores, this may limit some of your options in Stage 2. To be eligible to take a degree in Geology, students must take either GEOL10060 or GEOL10020 (or both modules) in Stage 1. Students who wish to take Stage 2 Geology are strongly recommended to take GEOL 10030.

You should note that the requirement for Mathematics within DN200 MPG varies and you should make sure that you are taking the correct set of Mathematics modules for your chosen subjects. Please seek academic advice to confirm your choices if you are in any doubt**.**

If you are interested in keeping your options open regarding pursuing a degree in the Biological or Chemical Sciences you should carefully read the DN200 BBB and DN200 CCS sections and seek academic advice if necessary, e.g. by contacting science@ucd.ie.

DENOMINATED PROGRAMMES STAGE 1

DN201 BSc in Computer Science

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following links:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 Programmes tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. DN201 Computer Science
5. In the introductory text (2nd last paragraph) click on the following : **in the list of undergraduate Science degrees**
6. Scroll down to view the programme information

DN230 Bachelor of Actuarial and Financial Studies

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following links:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 Programmes tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. Actuarial & Financial Studies
5. In the introductory text (2nd last paragraph) click on the following : **in the list of undergraduate Science degrees**
6. Scroll down to view the programme information

Module Descriptors

You can find detailed information on the Module Descriptors for all modules in DN200 Science, DN201 Computer Science and DN230 Actuarial and Financial Studies on the following link:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 the Module Tab
2. Select: Search by Subject, School or Keyword search,
3. For Keyword Search – Under keyword input the module code, e.g. MATH10290
4. Under filter select 'all information'
5. Under 'show modules from' – select relevant Stage(s), e.g. Stage 1
6. Select the Search Button – the title for the relevant module will appear under this box
7. Select the module listed, e.g. MATH10290 Linear Algebra for Science
8. You can now view the description, learning outcomes, assessment details, remediation details etc.

SCIENCE STAGE 2

SCIENCE (DN200)

BIOLOGICAL, BIOMOLECULAR & BIOMEDICAL SCIENCE (DN200BBB)

CHEMISTRY & CHEMICAL SCIENCES (DN200CCS)

MATHEMATICAL, PHYSICAL & GEOLOGICAL SCIENCES (DN200MPG)

COMPUTER SCIENCE (DN201)

BACHELOR OF ACTUARIAL & FINANCIAL STUDIES (DN230)

DN200 SCIENCE STAGE 2

Students entering Stage 2 Science (DN200) must select a minimum of **two** subjects. If two or more subjects are selected from among Pharmacology, Neuroscience, Physiology and Genetics, students **must choose an additional subject** that is not in that list. Subject selection will take place online during July.

The subjects available to you depend on the modules that you have attempted in Stage 1.

When you select your subjects you will be pre-registered to the relevant core modules for Stage 2. You will be able to select your remaining modules when module registration opens in August.

Students with between 50 and 60 Stage 1 credits

Under University regulations, students are entitled to progress to the next Stage carrying up to 2 failed modules. Within the BSc programme, the following additional progression rules apply.

A student may progress to the next Stage of a subject if they have the possibility of meeting the core and optional requirements of the incomplete stage through repeating or selecting modules and with the approval of the School. Module prerequisites may be waived by a School if a student is taking the appropriate Stage modules as co-requisites. A student will be provisionally accepted into a Subject under the mechanism approved by the Programme Board.

STAGE 2 REPEAT STUDENTS

Students returning to a repeat attempt at Stage 2 will find information on how to register to resits and repeats, via the Resit/Repeat/Substitution tab on Current Students website at: http://www.ucd.ie/students/resits_repeats/.

Students returning to a repeat attempt at Stage 2 in 2018-2019 should note that the curriculum for Stage 2 of the BSc degree programme has altered significantly in recent years and, in some instances, a module previously taken by a student in their first attempt at the stage may no longer be offered. In these cases a student should contact the Science Office for advice on appropriate modules (in the place of the now inactive courses) and to ensure that they are meeting the requirements for their subject areas in Stage 2 of their degree.

Students in a repeat attempt at Stage 2 have the opportunity to select modules from their next stage (via the 'Next Stage' tab in their SIS screen). The ability to take these modules can depend on a number of factors including whether these next stage modules will fit into the timetable for the modules required to complete their repeat stage. Other issues that need to be considered are pre-requisites and capacity.

Table 4: Core modules required for Stage 2 Biological, Biomedical and Biomolecular Sciences degree programmes in DN200

● Stage core ● Conditional core ● Programme core (can be taken in Stage 1 or 2) ● Programme core (can be taken in Stage 2 or 3)

Module code	Title	Biochem	Micro	Pharm	Neuro	Gene (A)	Gene (B)	CELB	Env Biol	Plant	Zool	Physiol	Math, Biol, Ed (A)	Math, Biol, Ed (B)
Any 2 of BIOL10130, BIOL10140 and BMOL10030		●	●	●	●	●	●	●	●	●	●	●	●	●
MATH10290	Linear Algebra	●	●	●	●	●	●	●	●	●	●	●		
PHYC10070	Foundations of Physics				●							●		
CHEM20090	Chemistry for Biologists	●	●	●	●	●	●	●	●	●	●	●	●	●
BMOL20060	Biomolecular Lab Skills 1	●	●	●	●	●	●	●	●	●	●	●	●	●
BMOL20070	Biomolecular Lab Skills 2	●	●	●	●	●								●
BMOL20080	Metabolism, Immunity & Infection	●	●	●	●	●						●		●
BMOL20090	Molecular Genetics & Biotech	●	●	●	●	●	●	●			●	●		●
BIOC20050	Principles of Biochemistry	●												
MICR20050	Principles of Microbiology		●											
PHAR20040	Pharmacology: Biomedical Science			●										
NEUR20050	Principles of Neuroscience				●									
GENE20020	Principles of Genetics					●	●							
BIOL20030	Biological systems						●	●	●	●	●		●	
CELB20060	Principles of Cell & Molecular Biology							●						
ENVB20050	Principles of Env Biol & Ecol								●				●	
BOTN20040	Principles of Plant Biology									●			●	
ZOOL20030	Principles of Zoology										●		●	
PHYS20020	Physiology of Sensing & Responding											●		
PHYS20030	Physiology of Internal Env of Human Body											●		
PHYS20040	Introduction to Physiology											●		
EDUC20020	Science & Maths Pedagogy												●	●
EDUC20030	Education for democracy												●	●
ACM10070	Math Modelling in the Sciences												●	●
MST20070	Multivariable Calculus												●	●
MST20040	Analysis												●	●
Any 1 of GENE20020, MICRO20050, PHAR20040														●

Table 5: Core modules required for Stage 2 Chemistry and Chemical Sciences degree programmes (DN200)

● Stage core ● Programme core (can be taken in Stage 1 or 2) ● Programme core (can be taken in Stage 2 or 3)

Module code	Title	Chem	Biophys Chem	Env Chem	Med Chem	Math, Chem, Ed
MATH10290	Linear Algebra for Science	●	●	●	●	
CHEM20020	Inorganic Chemistry (level 2)	●	●	●	●	●
CHEM20080	Basis of Physical Chemistry	●	●	●	●	●
CHEM20100	Basis of Inorganic Chemistry	●	●	●	●	●
CHEM20120	Physical Chemistry	●	●	●	●	●
CHEM20040	Organic Chemistry	●	●	●	●	●
CHEM20030	Functioning of Biomolecules		●			
CHEM20110	Env & Sustain Chem			●		
CHEM20050	Med Chem & Chem Biol				●	
GEOL20110	Global Environmental Change			●		
BIOC20050	Principles of Biochemistry				●	
BMOL20070	Biomolecular Lab Skills 2				●	
BMOL20090	Molecular Genetics & Biotech				●	
PHAR20040	Pharmacology: Biomedical Science				●	
EDUC20020	Science & Maths Pedagogy					●
EDUC20030	Education for democracy					●
ACM10070	Math Modelling in the Sciences					●
MST20070	Multivariable Calculus					●
MST20040	Analysis					●
MST20010	Algebraic structures					●
MATH20270	Theory of Games					●

Table 6: Core modules required for Stage 2 Mathematical, Physical and Geological degree programmes (DN200)

● Stage core ● Programme core (can be taken in Stage 1 or 2) ● Programme core (can be taken in Stage 2 or 3)

Code	Title	GEOL	Maths	Math Sci	ACM	FM	Stats	Physics	Theoretical Physics	Space	Phys, Math, Ed	Appl Math,Math, Ed
GEOL20190	Sedimentology & Palaeobiology	●										
GEOL20120	Investigating Minerals	●										
GEOL20200	Earth Structure and Geodata	●										
GEOL20210	Field Geology and Mapwork	●										
MATH20060	Calculus of Several Variables		●	●	●	●	●	●	●	●	●	●
ACM20030	Computational Science		●	●	●	●	●	●	●	●		●
ACM20150	Vector Integral & Differential Calculus		●	●	●	●		●	●	●	●	●
ACM20050	Classical Mech. & Special Rel.			●	●				●			●
ACM20060	Oscillations in Mech Systems			●	●				●			●
ACM10060	Applications of Differential Equations							●		●	●	
ECON10720	Business Economics					●						
FIN20010	Principles of Finance					●						
MATH10320	Mathematical Analysis		●	●	●	●					●	●
MATH10040	Numbers & Functions		●	●		●						●
MATH10340	Linear Algebra in MPS							●	●	●		
MATH20300	Linear Algebra 2 for MS		●	●	●	●	●					●
MATH20310	Groups, Rings and Fields		●	●	●							●
STAT20100	Inferential Statistics			●	●	●	●					
STAT20110	Probability Theory		●	●	●	●	●				●	●
STAT30240	Linear Models 1			●			●					
STAT30250	Linear Models 2			●			●					
PHYC20020	Introductory Quantum Mechanics							●	●	●	●	
PHYC20030	Thermal Physics and Materials							●	●	●	●	
PHYC20040	Exploring the Solar System									●		
PHYC20060	Methods for Physicists							●	●	●	●	
PHYC20080	Fields, Waves and Light							●	●	●	●	
PHYC20090	Electronics and Devices							●	●	●	●	
PHYC10050	Astronomy & Space Science									●		
EDUC20020	Science & Maths Pedagogy										●	●
EDUC20030	Education for democracy										●	●

STAGE 2 SUBJECTS IN SCIENCE

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following links:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 Programmes tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. DN200 Science
5. In the introductory text (2nd last paragraph) click on the following : **in the list of undergraduate Science degrees**
6. Scroll down to Programme Information – select the subject you wish to view

Notes:

BIOLOGICAL, BIOMEDICAL AND BIOMOLECULAR SCIENCES (DN200 BBB)

Programme Core – All Biological Subject Streams: ***(excluding Mathematics, Biology & Education – see note below)***

If not previously taken in Stage 1, Students enrolled to a Biological subject stream must take:

- MATH10290 Linear Algebra for Science in Semester 1 in Stage 2. **(This rule also applies to Geology and Chemistry subjects).**
- At least two of BIOL10130 Biology in Action; BIOL10140 Life on Earth or BMOL10030 in either Stage 1 or Stage 2

NOTE: Mathematics, Biology & Education students must take BIOL10130 and BIOL10140 in either Stage 1 or Stage 2.

Programme Core – Physiology and Neuroscience only

If Physics has not been taken in the Leaving Certificate, and if not previously taken in Stage 1, students enrolled to Stage 2 Physiology or Stage 2 Neuroscience must take PHYC10070 Foundations in Physics in Semester 1 in Stage 2.

Allowed Substitution and CHEM20090

All BBB subjects in Stage 2 require the module Chemistry for Biologists (CHEM20090) unless a student is also taking a CCS subject in Stage 2 (e.g. Biochemistry and Chemistry). In this case the modules taken as part of the Chemistry syllabus are an allowed substitution for CHEM20090. For this reason, in the tables below, CHEM20090 is marked as C* - core for all BBB subjects unless a student is also taking a CCS subject.

Stage 2 Subjects

DN200 BBB – Biological, Biomedical and Biomolecular Sciences
If you choose to focus your studies on the Biological, Biomedical and Biomolecular disciplines this will lead to a degree in one of the following subjects:

Biochemistry & Molecular Biology
Cell and Molecular Biology
Environmental Biology
Genetics
Microbiology
Pharmacology
Physiology
Plant Biology
Neuroscience
Zoology
Mathematics, Biology and Education

DN200 CCS – Chemistry and Chemical Sciences

You have chosen to focus your studies on the Chemical Sciences. This will lead to a degree in one of the following subjects:

Chemistry
Medicinal Chemistry and Chemical Biology
Chemistry with Biophysical Chemistry
Chemistry with Environmental & Sustainable Chemistry
Mathematics, Chemistry and Education

DN200 MPG – Mathematical, Physical and Geological Sciences

You have chosen to focus your studies on the Mathematical and/or Physical and/or Geological Sciences. This will lead to a degree in one of the following subjects:

Geology
Physics
Physics with Astronomy & Space Science
Theoretical Physics
Applied & Computational Mathematics
Statistics
Mathematical Science
Mathematics
Mathematical Science
Financial Mathematics
Mathematics, Physics & Education
Mathematics, Applied Maths & Education

Module Descriptors

You can find detailed information on the Module Descriptors for all modules in DN200 Science, DN201 Computer Science and DN230 Actuarial and Financial Studies on the following link:
http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 the Module Tab
2. Select: Search by Subject, School or Keyword search,
3. For Keyword Search – Under keyword input the module code, e.g. MATH10290
4. Under filter select 'all information'
5. Under 'show modules from' – select relevant Stage(s), e.g. Stage 1
6. Select the Search Button – the title for the relevant module will appear under this box
7. Select the module listed, e.g. MATH10290 Linear Algebra for Science
8. You can now view the description, learning outcomes, assessment details, remediation details etc.

DENOMINATED PROGRAMMES STAGE 2

DN201 BSc in Computer Science

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following link:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 Programmes tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. DN201 Computer Science
5. In the introductory text (2nd last paragraph) click on the following : **in the list of undergraduate Science degrees**
6. Scroll down to view the programme information.

www.ucd.ie/programmes/bhsci014

DN230 Bachelor of Actuarial and Financial Studies

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following link:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 Programmes tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. Actuarial & Financial Studies
5. In the introductory text (2nd last paragraph) click on the following : **in the list of undergraduate Science degrees**
6. Scroll down to view the programme information.

www.ucd.ie/programmes/bhsci008

Module Descriptors

You can find detailed information on the Module Descriptors for all modules in DN200 Science, DN201 Computer Science and DN230 Actuarial and Financial Studies on the following link:
http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 the Module Tab
2. Select: Search by Subject, School or Keyword search,
3. For Keyword Search – Under keyword input the module code, e.g. MATH10290
4. Under filter select 'all information'
5. Under 'show modules from' – select relevant Stage(s), e.g. Stage 1
6. Select the Search Button – the title for the relevant module will appear under this box
7. Select the module listed, e.g. MATH10290 Linear Algebra for Science
8. You can now view the description, learning outcomes, assessment details, remediation details etc.

SCIENCE STAGE 3

SCIENCE (DN200)

COMPUTER SCIENCE (DN201)

BACHELOR OF ACTUARIAL AND FINANCIAL STUDIES (DN230)

INFORMATION ON PROGRESSION TO STAGE 3 SCIENCE

Students entering Stage 3 in September 2018 will be allocated to their majors prior to the start of the 2018-2019 academic year. Students will be guaranteed one subject from within their chosen subject stream (i.e. one subject from within the groups BBB, CCS or MPG). Stage 2 students will be given more detailed advice on this process at an Advisory Session in Semester 2 of the 2018-2019 academic year. During Semester 2 of Stage 2 students will be asked to list their preferred degree majors in order of preference. A small number of majors will have a limit on places and, where the number of applications exceeds the number of available places, allocation will be made competitively on the basis of credits attained and GPA. In recent years, 98% of students have got places on their first choice subjects and the only subjects that have sometimes been over-capacity have been Pharmacology, Physiology and Neuroscience.

The satisfactory completion of the requirements of Stage 3 and achieving a minimum GPA of 2.48 will allow a student to proceed into their allocated major in Stage 4. Students who complete Stage 3 with a GPA of 2.47 or below, will graduate with a BSc (General Science) Degree. **Students who have completed Stage 3 will not be permitted to replace or substitute modules with a view to raising their GPA**. The BSc (General Science) degree is a level 8 Honours degree.

Please note that for the academic year 2018-2019, Joint Major Degrees are only available in the following subject areas and require the approval of the relevant Heads of Subject: Applied & Computational Mathematics, Cell & Molecular Biology, Mathematics, Physics, Physiology, Plant Biology, Statistics and Zoology. The choice of subjects is contingent on the approval of the Schools concerned and not all combinations may be available.

CHANGE OF MIND:

Should you wish to change your choice of subject areas once the allocation of places has been made, you should seek advice from the Science Office. You **may** be able to change your selection of subject areas but the choices available to you may be limited as some majors have a limited number of places.

Degree GPA Calculation:

The final degree GPA is based 70% on the final year and 30% on the penultimate year. For a four year degree it is 70:30 based on Stage 4: Stage 3. Students who graduate on completing Stage 3 with a BSc (General Sciences) Degree will have their degree GPA based 70% on Stage 3 and 30% on Stage 2. Students considering an international exchange for one or two semesters should visit:
http://www.ucd.ie/science/study/currentundergraduatesciencestudents/degreegpacalculation/

In the BAFS programme the final degree GPA is calculated on the unweighted GPAs of the final and penultimate stages of the programme and based on modules, including elective modules that the student completes and passes to satisfy the credit requirements of those stages.

STAGE 3 REPEAT STUDENTS

Students returning to a repeat attempt at Stage 3 will find information on how to register to resits and repeats, via the Resit/Repeat/Substitution tab, on the Current Students website at: http://www.ucd.ie/students/resitsrepeats.html

Students in Stage 3 of the BSc degree programme need to achieve a Stage 3 GPA of 2.48 in order to progress to Stage 4 of their programme. Students returning to a repeat attempt at Stage 3 should note that the result that they achieve in the resit or repeat attempt at these modules will be capped with a GPA of 2.0.

Students, in a repeat attempt at Stage 3, hoping to achieve the required Stage 3 GPA by substitution of option/elective modules must seek academic advice from the relevant School and the Science Office. Students need to consider the financial implications associated with the substitution of modules. Further information on fees and grants can be found http://www.ucd.ie/students/fees/index.html

Students who earn 50 or 55 credits after a full attempt at Stage 3 of the degree may be able to progress to Stage 4 carrying these failed modules. In order to do this, it must be clear that the student was in a position to achieve the required GPA of 2.48 even with the minimum passing grade achieved in their failed modules. A student who earns 50 or 55 credits, but is not in a position to clearly achieve a GPA of 2.48 upon completing Stage 3, will be advanced to a repeat attempt at Stage 3 in the following academic year. The Science Office will advise students who have earned 50 or 55 credits in Stage 3, after the release of the Semester 2 examination results, whether they have progressed to Stage 4 of their programme or whether they are returning to a repeat attempt at Stage 3 of the degree.

If you complete Stage 3 with a GPA of 2.47 or below, you will graduate with a BSc (General Science) Degree. Once you have completed Stage 3 you will not be permitted to replace or substitute modules with a view to raising your GPA.

Although a student can take 'Next Stage' modules while in a repeat attempt at a stage, students in a repeat attempt at Stage 3 are strongly advised against doing so if they have not achieved the required GPA. Enrolling to Stage 4 modules does not remove the requirement for a minimum Stage 3 GPA and fees spent on Stage 4 modules cannot be refunded to students who do not achieve the Stage 3 GPA required to progress into Stage 4.

STAGE 3 SUBJECTS (DN200)

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following link:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 Programmes tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. DN200 Science
5. In the introductory text (2nd last paragraph) click on the following : **in the list of undergraduate Science degrees**
6. Scroll down to Programme Information – select the subject you wish to view

www.ucd.ie/programmes/bhsci001

NOTE. Students taking subjects for which SCI30080 Professional Placement – Science is listed as a Stage 4 module need to register their interest in taking this module at the beginning of Stage 3, as it will be necessary to arrange the internship during Stage 3.

BIOLOGICAL, BIOMEDICAL AND BIOMOLECULAR SCIENCES (DN200BBB)

Biochemistry & Molecular Biology
Cell & Molecular Biology (Single Major)
Cell & Molecular Biology (Joint Major)
Environmental Biology
Genetics
Microbiology
Neuroscience
Pharmacology
Physiology (Single Major)
Physiology (Joint Major)
Plant Biology (Single Major)
Plant Biology (Joint Major)
Zoology (Single Major)
Zoology (Joint Major)
Mathematics, Biology & Education (Stream A)
Mathematics, Biology & Education (Stream B)

CHEMISTRY AND CHEMICAL SCIENCES (DN200 CCS)

Chemistry
Medicinal Chemistry & Chemical Biology
Chemistry with Environmental & Sustainable Chemistry
Chemistry with Biophysical Chemistry
Mathematics, Chemistry & Education

MATHEMATICAL, PHYSICAL AND GEOLOGICAL SCIENCES (DN200MPG)

Geology
Physics (Single Major)
Physics (Joint Major)
Physics with Astronomy & Space Science
Theoretical Physics
Applied & Computational Mathematics (Single Major)
Applied & Computational Mathematics (Joint Major)
Financial Mathematics
Mathematics (Single Major)
Mathematics (Joint Major)
Mathematical Science
Statistics (Single Major)
Statistics (Joint Major)
Mathematics, Physics & Education
Mathematics, Applied Mathematics & Education

DENOMINATED PROGRAMMES STAGE 3

DN201 BSc in Computer Science

- Computer Science
- Computer Science with Data Science

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following links:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 Programmes tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. Computer Science
5. Scroll down to view the programme information.

www.ucd.ie/programmes/bhsci014

DN230 Bachelor of Actuarial and Financial Studies

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following link:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 Programmes tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. Actuarial & Financial Studies
5. Scroll down to view the programme information.

www.ucd.ie/programmes/bhsci008

Module Descriptors

You can find detailed information on the Module Descriptors for all modules in DN200 Science, DN201 Computer Science and DN230 Actuarial and Financial Studies on the following link:
http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 the Module Tab
2. Select: Search by Subject, School or Keyword search,
3. For Keyword Search – Under keyword input the module code, e.g. MATH10290
4. Under filter select 'all information'
5. Under 'show modules from' – select relevant Stage(s), e.g. Stage 1
6. Select the Search Button – the title for the relevant module will appear under this box
7. Select the module listed, e.g. MATH10290 Linear Algebra for Science
8. You can now view the description, learning outcomes, assessment details, remediation details etc.

SCIENCE STAGE 4

SCIENCE (DN200)

BACHELOR OF ACTUARIAL AND FINANCIAL STUDIES (DN230)

COMPUTER SCIENCE (DN201)

REGULATIONS FOR STAGE 4 SCIENCE STUDENTS

UCD Registry will be informed of your designated subject area and you will be automatically enrolled to the core modules. The number of core modules can vary from subject to subject. You will then need to select the appropriate optional modules required for your major(s). **It is your responsibility to ensure that you are correctly registered.**

Stage 4 students should contact their School Office for details of timetables, research projects etc. as local arrangements are in place in each School.

Degree Classification
The BSc Programme Examination Board will classify the overall award to each graduate of an honours bachelors degree based on a degree GPA; for Stage 4 students this is calculated based on 30% for Stage 3 and 70% for Stage 4.

Honours will be awarded in Honours Bachelor degrees using the following classes of Honours:-
First Class Honours, Second Class Honours Grade 1 and Second Class Honours Grade 2. The decision of the Programme Board on the award of Honours will be based on the relevant GPA according to the following scheme:-

GPA	**Award**
3.68 or greater	First Class Honours
From 3.08 to 3.67 inclusive	Second Class Honours Grade 1
From 2.48 to 3.07 inclusive	Second Class Honours Grade 2
From 2.00 to 2.47 inclusive	Pass

STAGE 4 SUBJECTS (DN200)

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following links:

http://www.ucd.ie/students/course_search.htm

For Stage 4 details:

View details on the above link and take the following steps:

1. Select: 2018-2019 Programmes tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. DN200 Science
5. In the introductory text (2nd last paragraph) click on the following : **in the list of undergraduate Science degrees**
6. Scroll down to programme information and select the subject you wish to view

www.ucd.ie/programmes/bhsci001

NOTE. Students taking subjects for which SCI30080 Professional Placement – Science is listed as a Stage 4 module need to register their interest in taking this module at the beginning of Stage 3, as it will be necessary to arrange the internship during Stage 3.

Stage 4 Majors:

Applied & Computational Mathematics (Single Major)

Applied & Computational Mathematics (Joint Major)

Biochemistry & Molecular Biology (Single Major)

Cell & Molecular Biology (Single Major)

Cell & Molecular Biology (Joint Major)

Chemistry (Single Major)

Chemistry (Joint Major)

[Students MUST consult with the Stage 4 Coordinator in the School of Chemistry before choosing their modules for the Chemistry Joint Major. Failure to do so may render your module choices and registration invalid.]

Chemistry with Biophysical Chemistry (Single Major)

Chemistry with Environmental & Sustainable Chemistry (Single Major)

Environmental Biology (Single Major)

Genetics (Single Major)

Geology (Single Major)

Mathematics (Single Major)

Mathematics (Joint Major)

Biology, Mathematics & Education (Stream A)

Biology, Mathematics & Education (Stream B)

Chemistry, Mathematics & Education

Applied Mathematics, Mathematics & Education

Physics, Mathematics & Education

Mathematical Science (Single Major)

Medicinal Chemistry & Chemical Biology (Single Major)

Microbiology (Single Major)

Neuroscience (Single Major)

Pharmacology (Single Major)

Physics (Single Major)

Physics (Joint Major)

Physics with Astronomy & Space Science

Physiology (Single Major)

Physiology (Joint Major)

Plant Biology (Single Major)

Plant Biology (Joint Major)

Statistics (Single Major)

Statistics (Joint Major)

Theoretical Physics

Zoology (Single Major)

Zoology (Joint Major)

DENOMINATED PROGRAMMES STAGE 4

DN201 BSc in Computer Science

- Computer Science
- Computer Science with Data Science

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following link:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 Programmes tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. Computer Science
5. In the introductory text (2nd last paragraph) click on the following: **in the list of undergraduate Science degrees**
6. Scroll down to view the Programme Information

www.ucd.ie/programmes/bhsci014

DN230 Bachelor of Actuarial and Financial Studies

You can find detailed information on the programme curriculum as well as individual syllabi by Stage on the following links:

http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 Programme Tab
2. Select: Undergraduate
3. Scroll down and select 'Science'
4. Select the programme you wish to view, e.g. Actuarial & Financial Studies
5. In the introductory text (2nd last paragraph) click on the following: **in the list of undergraduate Science degrees**
6. Scroll down to view the Programme Information

www.ucd.ie/programmes/bhsci008

Module Descriptors

You can find detailed information on the Module Descriptors for all modules in DN200 Science, DN201 Computer Science and DN230 Actuarial and Financial Studies on the following link:
http://www.ucd.ie/students/course_search.htm

View details on the above link and take the following steps:

1. Select: 2018-2019 the Module Tab
2. Select: Search by Subject, School or Keyword search,
3. For Keyword Search – Under keyword input the module code, e.g. MATH10290
4. Under filter select 'all information'
5. Under 'show modules from' – select relevant Stage(s), e.g. Stage 1
6. Select the Search Button – the title for the relevant module will appear under this box
7. Select the module listed, e.g. MATH10290 Linear Algebra for Science
8. You can now view the description, learning outcomes, assessment details, remediation details etc.

CONTACT

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