



OLLSCOIL NA GAILLIMHÉ  
UNIVERSITY OF GALWAY

# College of Science and Engineering

First Year  
Academic Booklet

2026-27



# Contents

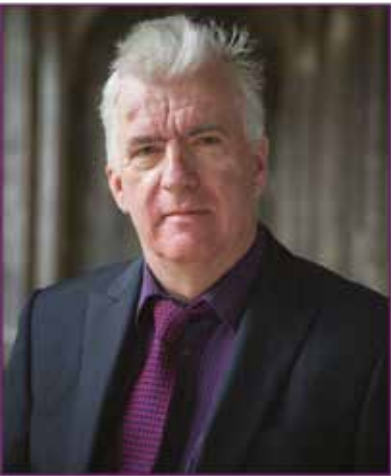
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For enquiries please call the  
First Year Student Hotline  
091-493999

The 2026-27 Academic Booklet is valid for that Session. Whilst every effort is made to ensure the contents of the Academic Booklet are accurate, the Academic Booklet is issued for the guidance of students and staff only. The Academic Booklet is not an offer to supply courses of study nor is it in any way to be construed as imposing any legal obligation on the College of Science and Engineering or University to supply courses either at all or in part in respect of any subject. No guarantee is given that courses, syllabuses, fees or regulations may not be altered, cancelled or otherwise amended at any time.

The Academic Booklet confers no rights on any student registered for the Session 2026–27.

# Welcome to the University of Galway



Welcome to the College of Science and Engineering. Our College is a research- intensive College and our research informs all our teaching.

Our programmes are progressive, diverse, and research-led. Drawing on the distinctive strengths of our region in areas such as medical technologies, marine ecology, data/ICT, sustainable energy and construction and enabling technologies, we work in partnership with business and industry to provide graduates with the skills and knowledge to drive innovation, economic growth and research, and to address global challenges and concerns.

The College now offers 23 different undergraduate degree programmes to over 1000 first-year students. All of our students are most welcome and, we wish each and every one of you success and hope that you fully partake of the opportunities presented to you both academically and socially during your time at the University.

To help you adjust to University life, we have assigned an Advisor to each first year student. You will be informed of your academic Advisor during the first few weeks of term. (\*some programmes may not participate) Should circumstances arise during the year that adversely affect your performance at University, you should arrange to make an appointment to see your dedicated academic Advisor or our Student Support Officer, Kelly Moore. We look forward to meeting you at Orientation.

Professor Walter Gear.  
*Executive Dean.*

# Making the Transition to University

When students make the transition from school to University they are faced with a whole range of new experiences and issues. You may be living away from home for the first time, you may not know any of your classmates yet, you are probably not familiar with the campus and may not even be familiar with Galway city. One of the most significant issues for you though will be getting to grips with the way university differs from school. For instance, no one is going to nag you about deadlines.

Learning at university is of course a very different experience to that of being at school. For a start, as a student you are considered an adult learner, capable of managing your own study schedule and putting in the time to read textbooks, articles and other materials so that you really understand your chosen subjects and feel more confident as you progress.



## Supplementary Learning outside of the classroom

The lectures, seminars, laboratory classes and other timetabled classes are actually only a small part of the total effort that you need to put in to succeed. Supplementary learning outside of lectures is a critical component of the learning experience. All of the assessment, coursework and available credit are based on the idea that you are spending a minimum of 40 hours per week, every week of the semester, on learning and assessment. This just represents a full-time workload and is the standard model used across Ireland and all courses that use European Credits (something called ECTS – European Credit Transfer System). In some courses it may be a little higher than this because of the nature of the subject.

The other big difference between university-level courses and some other types of qualification is that you really need to try to understand the subject and the ideas you come across in class or your reading. It's not about memorizing and regurgitating facts, but about seeing the ideas that lie behind them and being able to make use of knowledge to tackle new problems. That can be tricky to adjust to and sometimes it is really difficult to make sense of new concepts. The good news is, that this is exactly what learning something new is like for everyone. There are always ideas that are really tricky to grasp at first and which don't make sense until you try again and again, hopefully getting some feedback on your efforts and maybe through working with fellow students. But when it does 'click' things fall into place and you get a sense of satisfaction that hopefully makes some of that struggle worth it! That's why we say you need to spend so many hours on self-study, because we know from experience (and extensive research on education) that you will need that time.

## Attendance and Submission of Assignments

It is essential that you get into the habit of attending all your lectures, tutorials and laboratories. Every year we see that there is a direct correlation between good attendance and good performance in examinations. All lecturers will routinely monitor attendance and poor attendance will have consequences.

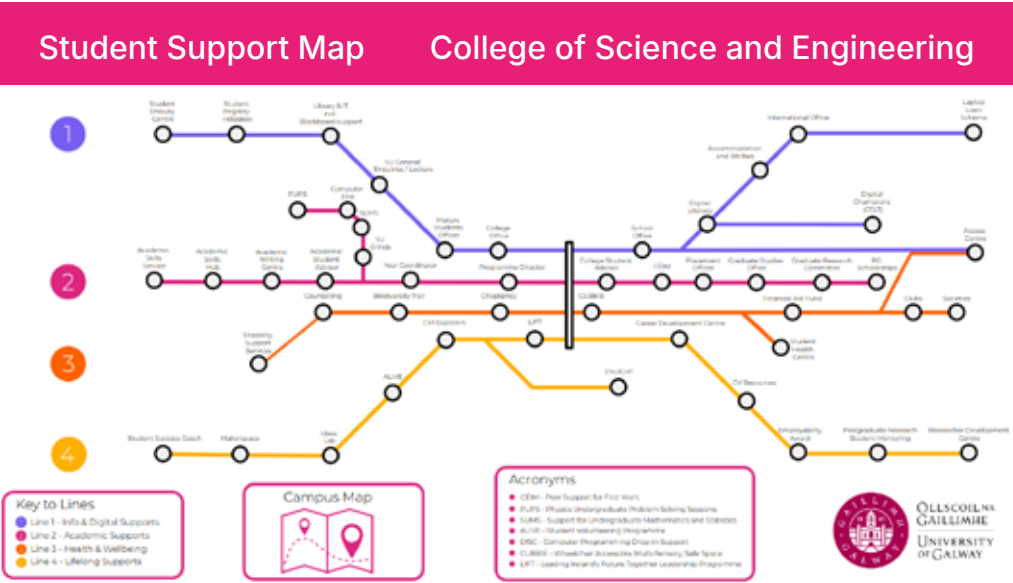
It is also critical that assignments are submitted on time. You will need to learn to prioritise your work and leave plenty of time for assignments. Familiarise yourself with the library so that you know where you need to go to locate books and articles relevant to your area of study.

**"It's not about memorizing and regurgitating facts, but about seeing the ideas that lie behind them and being able to make use of knowledge to tackle new problems."**

# Supports in place

The University has in place a comprehensive range of supports and resources to help you transition to University life and learning. These span Helpdesk/info-type supports, Academic supports; Health and wellbeing supports and Lifelong learning/development supports. Examples of the academic supports that are available to you include Student Support Services facility, Orientation programmes, tours of campus, 1st year handbooks, a mentor system etc.

From an academic perspective there are also a range of invaluable supports in place such as the Academic Writing Centre, SUMS (Maths Support Centre) and DISC (Computer Programming Drop In Support Centre). See our Interactive Student Support Map [universityofgalway.ie/science-engineering/studentinformation/](https://universityofgalway.ie/science-engineering/studentinformation/).



## Student Support Officer



"If you find yourself feeling overwhelmed or need help getting back on track, I am here to help."

My name is Kelly Moore and I am the Student Support Officer in the College of Science and Engineering. My role is to support you during your time here at the University of Galway. Starting university can be an exciting but challenging time. If you find yourself feeling overwhelmed or need help getting back on track, I am here to help. I can offer personal support, advice and information on issues that affect your university experience, including general welfare and personal challenges that may compromise your ability to study. I can offer advice about study planning, time management, financial assistance and support you during medical, emotional, or mental health challenges you may be experiencing.

I provide a confidential, non-judgemental, and empathetic spwace for you to share your concerns. Please do not hesitate to get in touch with me. I am here to support you and I am looking forward to meeting you. Best of luck with this new and exciting chapter of your life. Best Wishes, Kelly Moore, Student Support Officer, [StudentsupportCSE@universityofgalway.ie](mailto:StudentsupportCSE@universityofgalway.ie)



To view the interactive map you can scan this QR code:



To make an appointment with Kelly you can scan this QR code:

SUMS  
(Support for Undergraduate Maths and Statistics)

**SUMS** is a drop-in maths support centre where University of Galway students can get help with any aspect of Mathematics, Statistics or Mathematics-related subjects. SUMS provides a comfortable, informal environment where students can study at their own pace, with expert tutors on hand to offer individual help, if required.

The service is FREE to students and is an initiative of the Students’ Union and the School of Mathematical and Statistical Sciences. SUMS is located on the ground floor in Aras de Brun.

Further information including opening hours can be found here:  
<https://www.universityofgalway.ie/public-sites/s-u-m-s/>

Email: [sums@universityofgalway.ie](mailto:sums@universityofgalway.ie)

Canvas

**Canvas** is a learning system which allows lecturers to post materials such as lecture notes, reading materials, weblinks, videos, quizzes, etc, online. Many courses also use this for announcements, news items and for students to submit their coursework. Canvas has a lot of additional tools and capabilities and quite which of these are used is decided by the lecturer or course team. Canvas is available 24/7 from both on and off campus. Not every lecturer or module will necessarily be using it, but most will and in different ways. You should certainly login regularly to check for updates to your modules.



Scan here for more  
information on SUMS

ComputerDISC

**ComputerDISC** is a drop-in support centre for students who are enrolled in computer programming or software development courses. ComputerDISC is located on the first floor of the Computer Science Building. Students can drop in at any time during opening hours as no appointments are necessary. Further information can be found at [universityofgalway.ie/science-engineering/school-of-computer-science/currentstudents/computerdisc/](https://universityofgalway.ie/science-engineering/school-of-computer-science/currentstudents/computerdisc/)

Academic Writing Centre

The **Academic Writing Centre** (housed in the Library) offers free tutorials on essay writing. Last year, AWC tutors helped over 500 students to overcome recurrent problems with grammar, punctuation, spelling and essay structure. There is no need to make an appointment, simply drop in during the opening hours of the Centre <https://library.universityofgalway.ie/studying/awc/#>

Academic Skills Hub

The **Academic Skills Hub** aims to support students to develop key skills for academic success.

The **Academic Skills Hub** provides brief introductions to, and top tips on, some key academic skills, as well as some information to help you get started. <https://www.universityofgalway.ie/academic-skills/>

Grind Register

The Students’ Union maintains a **Grind Register** service detailing a list of people offering grinds to students. Details are available here: <https://su.universityofgalway.ie/advice/grinds-register/>

“Last year, AWC tutors helped over 500 students to overcome recurrent problems with grammar, punctuation, spelling and essay structure.”

# CÉIM Peer Learning

CÉIM is an academic peer learning programme for 1st year students in specific disciplines and is a joint initiative by the College of Science and Engineering and University of Galway Students’ Union.

CÉIM is currently available to 1st year students studying:

- Agricultural Science
- Biomedical Science
- Biotechnology
- Computer Science & Information Technology
- Earth & Ocean Sciences
- Engineering
- Financial Maths & Economics
- Genetics and Genomics
- Marine Science
- Physics
- Project & Construction Management (semester 2)
- Science (GY301)

Designed to complement your lectures and tutorials, CÉIM helps you gain a better understanding of your coursework in a relaxed atmosphere, quickly adjust to life at University of Galway, and get to know other students in your course. Research shows that students who attend CÉIM regularly achieve higher grades on average than those who do not.

CÉIM sessions are welcoming and friendly, yet purposeful, with the emphasis on everyone in the group working together. Attendance is taken at CÉIM sessions.

### Start Dates

CÉIM sessions start:

- Week of 14 September: Agricultural Science, Biomedical Science, Biotechnology , Computer Science & Information Technology, Earth & Ocean Sciences, Engineering, Financial Mathematics & Economics, Genetics & Genomics, Marine Science, Physics
- Week of 21 September: Science (GY301)

| How to take part |                                                                                                                                             |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1                | A few days before your CÉIM session starts, log into <b>yourspace.universityofgalway.ie</b> using your University of Galway student details |
| 2                | Click <b>CÉIM</b> in the left menu                                                                                                          |
| 3                | See your CÉIM session time and information                                                                                                  |



# Academic Advisory Scheme

The University is probably the largest organisation most of you will have been involved with. The numerous buildings, lecture theatres, labs, offices, teaching rooms and library space scattered across the campus host about 18,000 students and more than 3,000 staff. Added to this, you’ll be learning a new vocabulary and negotiating new systems too.

The university is very aware of the big, exciting step you’ve taken in coming here and there are many supports available to students starting out on their university experience, some more formal than others. The College Academic Student Advisory Scheme offers informal supports and guides to all science and engineering students. Each of you will be assigned an Academic Advisor who will be a point of contact who can guide or signpost you to any relevant supports or assistance you need. The role of the Advisor is to be another support for you and to help you navigate and negotiate the start of your university experience.

Your Advisor will contact you soon after you’ve registered to arrange an introductory meeting with you in the first two weeks of term. The principal role of your Advisor is to arrange that you receive the help that you may need during your initial years in university. If you find, for example, that you are running into academic or personal problems, or that you are unsure of what is required of you, or if you have queries about the facilities available, you are strongly recommended to make contact with your Advisor at the earliest possible opportunity. They will make every effort to either help you directly or will ensure that you are put in contact with the staff members who can best provide the necessary advice.



# Jargon Buster – Modules, Programmes, Levels

All courses in University of Galway are made up of ‘*modules*’. These are usually described by a set of ‘*Learning Outcomes*’ that state what you should be able to do after successfully completing the module and a number of ‘*ECTS*’ credits. ECTS is basically an indicator of how big the module is. A module that is rated at 5 ECTS, for example, means that you need to spend at least 100 hours of concerted effort (including lectures, exams and self-study) in order to complete it satisfactorily. A module that is 10 ECTS, unsurprisingly, requires double that effort. A whole year’s worth of modules (if you are a full-time student) should total up to 60 ECTS. To be awarded the credits for a module you must of course have successfully completed it in terms of attendance, participation, coursework and examinations.

A ‘programme’ is a whole degree course, made up of all the individual modules. It is usually described by ‘Programme Learning Outcomes’ and there will be rules that determine which modules you need to successfully complete each year to end up with the appropriate degree title (e.g. BSc, BE (Mechanical), BComm, etc)).

All of our degree programmes are recognised by employers and other educational institutions and comply with international agreements on course structure (the ‘Bologna Process’). All programmes are subject to regular quality reviews where the quality of the teaching and learning is scrutinised by an external panel with international experts in the subject. Every programme also has an ‘external examiner’ (a senior academic from another university) who oversees the final decisions about grades, checks the examination papers and processes and guarantees that the quality of our courses and graduates compare well with the standards in the subject.

Ireland has a National Framework of Qualifications (NFQ) that describes the levels of all courses of study and this matches similar schemes in other countries so that it is easy for employers and educators to make sense of different qualifications obtained from different institutions, as well as making it easier for students to move between one country and another, picking up credit and qualifications along the way. According to this scheme, an undergraduate honours degree (BA, BSc, BE, etc) is a ‘level 8’ qualification. A Masters would be level 9 and a PhD level 10.

“All programmes are subject to regular quality reviews where the quality of the teaching and learning is scrutinised by an external panel with international experts in the subject.”

## So what does this mean in practice?

Well, that you must attend all the scheduled classes, spend time every week on reading, studying and working through course materials and that what you are trying to do in the assessments and exams is show that you can actually achieve the learning outcomes. There’s still plenty of time to socialize and get involved in clubs and sports (see later section) outside the 40 hours! The lectures, labs, tutorials and other classes, combined with the textbooks, online materials, and the library are all resources that the University provides to help you succeed. At the end of the day, though, success depends on your own efforts. It is possible to not only succeed in the assessments and feel a sense of achievement at having learned new knowledge and skills, but also to enjoy being a student in your chosen subject. Your final qualification will be well-regarded and recognised internationally by employers and other educational institutions across the world.

The University doesn’t see you as a ‘customer’ or a ‘consumer’ but hopes that you will, instead, be a member of our academic community. That you will be able to get the most out of being in a city of ideas and learning not just about the basics of your subject but also get a feel for the latest research, the big ideas, the debates and where future opportunities lie for further study, research or employment.

## Science Student Laboratory Numbers

Following the completion of your on-line registration, you will be emailed a laboratory number (normally in week 2 of term). This number is used when drawing up timetables for practical classes.

## Vevox (live polling)

University of Galway uses Vevox, which is an interactive-polling software. Teaching staff may run polls during lectures in order to facilitate discussion and engagement. Vevox runs on a web browser, or as an app on smartphones and tablets. If your lecturer runs a poll in class, they will first prompt you to join the poll via your phone or laptop via the web address [vevox.app](https://vevox.app) using a nine digit code which they will display on screen.

“The University doesn’t see you as a ‘customer’ or a ‘consumer’ but hopes that you will, instead, be a member of our academic community.”

# Know The Code!

Your programme has a unique University Code. This is the code you will see on your registration statement and class and examination timetables. For example (GY301) Science is referred to as 1BS1

- (GY301) Science (1BS1)
- (GY303) Biomedical Science (1BO1)
- (GY304) Biotechnology (1BY1)
- (GY308) Environmental Science (1EV1)
- (GY309) Financial Mathematics & Economics (1FM1)
- (GY310) Marine Science (1MR1)
- (GY313) Occupational Health & Safety Management (1OHM1)
- (GY314) Earth & Ocean Sciences (1EH1)
- (GY318) Biopharmaceutical Chemistry (1BPC1)
- (GY319) Mathematical Science (1BMS1)
- (GY320) Physics (1PHY1)
- (GY321) Genetics & Genomics (1BGG1)
- (GY322) Agricultural Science (1AGS1)
- (GY323) Zoology (1ZOO1)
- (GY350) Computer Science (1BCT1)
- (GY401) Engineering (Undenominated) (1EG1)
- (GY402) Civil Engineering (1BE1)
- (GY405) Mechanical Engineering (1BM1)
- (GY406) Electronic & Computer Engineering (1BP1)
- (GY408) Biomedical Engineering (1BG1)
- (GY410) Project & Construction Management (1BCM1)
- (GY413) Energy Systems Engineering (1BSE1)
- (GY414) Electrical & Electronic Engineering (1BLE1)

# Programme Information

## (GY301) Science (1BS1)

| First year modules are:                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BO101 Biology<br>CH101 Chemistry<br>PH101 Physics<br>MA180 Mathematics (Honours)<br>MA161 Mathematical Studies<br>MP180 Applied Mathematics<br>CS1102 Computing and Data Science                                                                                                                    |                                                                                                                                                                                                            |
| From second year students study a selection of <i>Pathways</i> .<br>A <i>Pathway</i> is a collection of complementary modules designed to provide a comprehensive study path and graduate skills in a subject area, a path from Year 2 to Year 4.<br>Year 2 pathways of study in GY301 Science are: |                                                                                                                                                                                                            |
| Anatomy<br>Pharmacology<br>Physiology<br>Medicinal Chemistry<br>Chemistry<br>Biochemistry<br>Microbiology<br>Green Biosciences<br>Botany and Plant Science                                                                                                                                          | Zoology<br>Earth and Ocean Sciences<br>Physics and Climate Physics<br>Physics and Applied Physics<br>Applied Mathematics<br>Mathematics<br>Computing<br>Mathematical Studies and Computing<br>Data Science |

1. First year students study four 15 ECTS subjects, **registering for one of the registration groups A-E**, as set out in Table 1 (page 16 & 17)
2. After selecting the registration group, **students will be automatically registered for the required modules within the registration group and will select from the optional modules** listed within the group to a total of 60 ECTS.
3. Students should note that their **selection of optional modules in First Year can have a consequence on their choice of pathways in second year**, please refer to the table for a listing of pathway eligibility within each registration group.
4. Some second year pathways of study have limited places, i.e. quotas, please refer to information describing **2nd year Module Selection and Allocation** on page 18 & 19.
5. For full programme and pathway specification please refer to the **GY301 Bachelor of Science Course Outline**

| GY301 Science – First Year Registration Groups |                                  |                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                            |
|------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reg group A                                    | Modules in registration group A: |                                                                                                                                                      | Satisfies pre-requisite modules for entry to Year 2 pathways:                                                                                                                                                                                                                                                                                                |                                                                                                                                                                            |
|                                                | Required, 3×15 ECTS              | BO101 Biology                                                                                                                                        | <b>Anatomy, Pharmacology, Physiology, Medicinal Chemistry, Chemistry, Biochemistry, Microbiology, Green Biosciences, Botany and Plant Science, Zoology, Earth and Ocean Sciences, Physics and Applied Physics, Physics and Climate Physics,</b> and dependent on optional module selection:<br>- Mathematics (if MA180),<br>- Applied Mathematics (if MP180) | This group does NOT satisfy entry to Year 2 Pathways:<br><i>Computing, Data Science</i>                                                                                    |
|                                                |                                  | CH101 Chemistry                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                            |
|                                                |                                  | PH101 Physics                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                            |
|                                                | Optional, 1×15 ECTS              | and one from: <ul style="list-style-type: none"><li>MA161 Mathematical Studies</li><li>MA180 Mathematics</li><li>MP180 Applied Mathematics</li></ul> |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                            |
| Reg group B                                    | Modules in registration group B: |                                                                                                                                                      | Satisfies pre-requisite modules for entry to Year 2 pathways:                                                                                                                                                                                                                                                                                                |                                                                                                                                                                            |
|                                                | Required, 3×15 ECTS              | BO101 Biology                                                                                                                                        | <b>Medicinal Chemistry, Chemistry, Microbiology, Green Biosciences, Botany and Plant Science, Zoology, Earth and Ocean Sciences, Computing,</b> and dependent on optional module selection:<br>- Mathematics, Data Science (if MA180),<br>- Applied Mathematics (if MP180).                                                                                  | This group does NOT satisfy entry to Year 2 Pathways:<br><i>Anatomy, Pharmacology, Physiology, Biochemistry, Physics and Applied Physics, Physics and Climate Physics.</i> |
|                                                |                                  | CH101 Chemistry                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                            |
|                                                |                                  | CS1102 Computing and Data Science                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                            |
|                                                | Optional, 1×15 ECTS              | and one from: <ul style="list-style-type: none"><li>MA161 Mathematical Studies</li><li>MA180 Mathematics</li><li>MP180 Applied Mathematics</li></ul> |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                            |
| Reg group C                                    | Modules in registration group C: |                                                                                                                                                      | Satisfies pre-requisite modules for entry to Year 2 pathways:                                                                                                                                                                                                                                                                                                |                                                                                                                                                                            |
|                                                | Required, 3×15 ECTS              | BO101 Biology                                                                                                                                        | <b>Green Biosciences, Botany and Plant Science, Zoology, Earth and Ocean Sciences, Physics and Applied Physics, Physics and Climate Physics, Computing,</b> and dependent on optional module selection:<br>- Mathematics, Data Science (if MA180),<br>- Applied Mathematics (if MP180).                                                                      | This group does NOT satisfy entry to Year 2 Pathways:<br><i>Anatomy, Pharmacology, Physiology, Medicinal Chemistry, Chemistry, Biochemistry, Microbiology.</i>             |
|                                                |                                  | PH101 Physics                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                            |
|                                                |                                  | CS1102 Computing and Data Science                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                            |
|                                                | Optional, 1×15 ECTS              | and one from: <ul style="list-style-type: none"><li>MA161 Mathematical Studies</li><li>MA180 Mathematics</li><li>MP180 Applied Mathematics</li></ul> |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                            |

|             |                                  |                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                           |
|-------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reg group D | Modules in registration group D: |                                                                                                                                                                     | Satisfies pre-requisite modules for entry to Year 2 pathways:                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                           |
|             | Required, 3×15 ECTS              | CH101 Chemistry                                                                                                                                                     | <b>Chemistry, Physics and Applied Physics, Physics and Climate Physics, Computing, Earth and Ocean Sciences,</b> and dependent on optional module selection:<br>- Mathematics (if MA180),<br>- Data Science (if MA180),<br>- Applied Mathematics (if MP180).                                                                                                                                         | This group does NOT satisfy entry to Year 2 Pathways:<br><i>Anatomy, Pharmacology, Physiology, Medicinal Chemistry, Biochemistry, Microbiology, Green Biosciences, Botany and Plant Science, Zoology.</i> |
|             |                                  | PH101 Physics                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                           |
|             |                                  | CS1102 Computing and Data Science                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                           |
|             | Optional, 1×15 ECTS              | and one from: <ul style="list-style-type: none"><li>MA161 Mathematical Studies</li><li>MA180 Mathematics</li><li>MP180 Applied Mathematics</li></ul>                |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                           |
| Reg group E | Modules in registration group E: |                                                                                                                                                                     | Satisfies pre-requisite modules for entry to Year 2 pathways:                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                           |
|             | Required, 2×15 ECTS              | MA180 Mathematics                                                                                                                                                   | <b>Mathematics, Applied Mathematics, Earth and Ocean Sciences,</b> and dependent on optional module selection:<br>- Computing, Data Science (if CS1102),<br>- Physics and Applied Physics, Physics and Climate Physics (if PH101),<br>- Green Biosciences, Botany and Plant Science, Zoology, (if BO101)<br>- Chemistry (if CH101),<br>- Microbiology, Medicinal Chemistry (if both BO101 and CH101) | This group does NOT satisfy entry to Year 2 Pathways:<br><i>Anatomy, Pharmacology, Physiology, Biochemistry</i>                                                                                           |
|             |                                  | MP180 Applied Mathematics                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                           |
|             | Optional, 2×15 ECTS              | and two from: <ul style="list-style-type: none"><li>CS1102 Computing and Data Science</li><li>BO101 Biology</li><li>CH101 Chemistry</li><li>PH101 Physics</li></ul> |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                           |

Further information on offerings and pre-requisites for Year 2 pathways and elective modules can be found in the [Course Outline document](#)

GY301 Science,  
Year-2 pathway and elective module allocations – a Guide.

In 2nd Year, there is a capacity limit on the places available in each pathway/elective. Students are allocated their pathways/electives based on their overall 1st-Year results and submitted pathways/electives preferences for 2nd Year.

Procedure for Allocation of Year 2 Pathways and Electives:

1. A student is allocated pathways and electives with consideration to student preferences as submitted to the College Office, via the “2nd Year Science Module Selection Form”, by a specified date (usually mid-May).
2. Each student is allocated Year-2 modules to an exact total of 60 ECTS.
3. All students are allocated at minimum two Year-2 pathways.
4. Students must satisfy the Year-1 pre-requisite modules to enter a Year-2 pathway.
5. Each student will be allocated Year-2 pathways and modules that satisfy entry into at least one approved Year-3 stream, i.e., an approved Year-3 single-subject pathway or approved compatible dual-pathway.
6. Some pathways have quotas, i.e., a limited number of places. Where a student has specified a preference for a pathway for which there are no places remaining, then the student’s next preference will be considered. Students progressing in June following the Summer Examinations are ranked by order of Overall Merit achieved in the First-Year Examinations. In the order of ranking, students with higher Overall Merit are reviewed first for the purposes of allocating pathways.
7. Some pathways are not approved compatible pathways at 2nd year. Where a student has specified a preference for a pathway which is not compatible with a pathway already allocated to the student, then the student’s next preference will be considered.
8. Some pathways at Year 3 can only be taken as part of a dual-pathway stream. In allocating modules that satisfy entry into at least one Year-3 stream, where a student has been allocated a pathway which can only be taken in Year 3 as part of a dual-pathway, then the next compatible pathway in the student’s preferences will also be allocated.
9. Students may be allocated up to three pathways at 2nd year. In the preferences survey, students are asked to select one of two options which provides indication that the student wishes to forego one of three 20-credit pathway allocations in favour of a selection of two pathways plus elective modules. Students provide ranked preferences for all electives, in addition to their ranked pathways via the preferences survey.
10. When pathway allocation has been completed for a student, and the total credits for allocated modules for those pathways is less than 60 credits, then modules from the elective list will be allocated to the student, with consideration to the student’s preferences and timetable compatibility.
11. Information on pathways, electives, and Year-1 pre-requisite modules can be found in the GY301 Science Course Outline document. Students are provided with introductory talks on pathway options throughout First-Year Orientation. Students are provided with a Year-2 Advisory Programme, towards the end of Semester 2 of First Year, usually held in March, prior to submitting their preferences via the “2nd Year Science Module Selection Form” in mid-May.
12. Students progressing in June following the Summer Examinations, should expect allocations to be communicated to them, by email to their official university email address, no later than the end of July. Students progressing following the Autumn Examinations, should expect allocations to be communicated to them shortly after exam results are released for the Autumn sitting.

Places available in each 2nd Year Science Pathway can vary up or down, however the following provides a number of places as an indicative guide. For guidance on how pathways are allocated to students please refer to the Procedure for Allocation of Year 2 Pathways and Electives.

| GY301 Science 2nd Year Pathway                                                                | Places                 |
|-----------------------------------------------------------------------------------------------|------------------------|
| Anatomy                                                                                       | 15                     |
| Pharmacology                                                                                  | 15                     |
| Physiology                                                                                    | 35                     |
| Medicinal Chemistry                                                                           | 20                     |
| Chemistry                                                                                     | 105                    |
| Biochemistry                                                                                  | 120                    |
| Microbiology                                                                                  | 100                    |
| Green Biosciences                                                                             | 65                     |
| Botany and Plant Science                                                                      | 40                     |
| Zoology                                                                                       | 30                     |
| Earth & Ocean Sciences                                                                        | 45                     |
| Physics and Applied Physics, Physics and Climate Physics                                      | 80                     |
| Mathematics, Applied Mathematics, Computing, Mathematical Studies and Computing, Data Science | No place limit applies |

**For More Information:**  
Students should reference the “[GY301 Bachelor of Science Course Outline Document](#)” for programme structure and pathways and refer to the 1BS1 Course Canvas Page for helpful guidance and direction.

**Contacts:**  
Programme Director: Dr Emma Holian,  
Email: [scienceGY301@universityofgalway.ie](mailto:scienceGY301@universityofgalway.ie)

Academic Advisor: Each student is allocated an academic advisor to support your academic journey over the first two years of the programme, please do connect with your Academic Advisor in the first few weeks of term.

(GY303) Biomedical Science (1BO1)

Modules:

| Type | Choice              |    | ECTS | Code   | Module Title                                      |
|------|---------------------|----|------|--------|---------------------------------------------------|
| Core | (4*10 + 1*15 + 1*5) | 60 | 15   | BO101  | Biology                                           |
|      |                     |    | 10   | CH1101 | The Fundamentals of Chemistry for Health Sciences |
|      |                     |    | 10   | PH1103 | Physics for Medical and Biomedical Students       |
|      |                     |    | 10   | PC1105 | Fundamentals of Human Biology                     |
|      |                     |    | 10   | BM1101 | Skills for Biomedical Science 1                   |
|      |                     |    | 5    | BM111  | Introduction to Biomedical Research               |
|      | Total               | 60 |      |        |                                                   |

**Note:**  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr. Helen Dodson, Room HBB\_1020, Anatomy, Human Biology Building, Ph: 091 492162, Email: [helen.dodson@universityofgalway.ie](mailto:helen.dodson@universityofgalway.ie)  
  
First Year Co-ordinator: Dr Ailish Hynes, Physiology, Room HBB-1007, Human Biology Building, Ph: 091 493573, Email: [ailish.hynes@universityofgalway.ie](mailto:ailish.hynes@universityofgalway.ie)

(GY304) Biotechnology (1BY1)

Modules:

| Type     | Choice          |    | ECTS | Code   | Module Title                                                  |
|----------|-----------------|----|------|--------|---------------------------------------------------------------|
| Core     | (2*15+1*10+3*5) | 55 | 15   | BO101  | Biology                                                       |
|          |                 |    | 10   | BG1102 | Biotechnology Skills I                                        |
|          |                 |    | 15   | CH101  | Chemistry                                                     |
|          |                 |    | 5    | BG1101 | Employability for Biotechnology                               |
|          |                 |    | 5    | ST2001 | Statistics for Data Science 1                                 |
|          |                 |    | 5    | ST2002 | Statistics for Data Science 2                                 |
| Optional | (1*5)           | 5  | 5    | FR137  | French for Biotechnology I                                    |
|          |                 |    | 5    | GR1105 | Beginners German for Biotechnology                            |
|          |                 |    | 5    | GR150  | German for Biotechnology I                                    |
|          |                 |    | 5    | GA1102 | Irish for Biotechnology I/Gaeilge don Bhith-theicneolaíocht I |
|          | Total           | 60 |      |        |                                                               |

**Note:**  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

Students must select one of the language options FR137, GA1102, GR150 or GR1105. GA1102 requires at least H4 Irish in Leaving Certificate. Beginners can choose either FR137 or GR1105. Please contact Dr Flaus if you would like advice for your language selection.

**Contacts:**  
Year 1-2 Coordinator: Dr. Andrew Flaus Room 131, Biochemistry, School of Biological and Chemical Sciences, Email: [andrew.flaus@universityofgalway.ie](mailto:andrew.flaus@universityofgalway.ie)  
  
Dr. Flaus is the Advisor for all first year Biotechnology students in the Academic Advisory Scheme. Meetings should be arranged in advance.

Office hours: Dr Flaus is available flexibly for general queries. Please make contact by email to arrange a meeting.

(GY308) Environmental Science (1EV1)

Modules:

| Type     | Choice       |    | ECTS | Code   | Module Title                        |  |
|----------|--------------|----|------|--------|-------------------------------------|--|
| Core     | (1*15 + 3*5) | 30 | 15   | BO101  | Biology                             |  |
|          |              |    | 5    | EV102  | Hot Topics in Environmental Science |  |
|          |              |    | 5    | LW3114 | Introduction to Law                 |  |
|          |              |    | 5    | ST2001 | Statistics for Data Science 1       |  |
| Optional | (2*15)       | 30 | 15   | CH101  | Chemistry                           |  |
|          |              |    | 15   | PH101  | Physics                             |  |
|          |              |    | 15   | CP102  | Chemistry/Physics                   |  |
|          | (1*15 + 3*5) |    | 5    | EV1101 | Introduction to Irish Habitats      |  |
|          |              |    | 5    | PS122  | Introductory Psychology 1           |  |
|          |              |    | 5    | PS124  | Introductory Psychology 2           |  |
|          | Total        | 60 |      |        |                                     |  |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

Where modules are indicated as Optional, students must select their preferred options as follows: Option 1: CH101: Chemistry and PH101: Physics  
OR  
Option 2: CP102: Chemistry/Physics, EV1101: Introduction to Irish Habitats, PS122: Introductory Psychology I, PS124: Introductory Psychology 2

**Contacts:**  
Programme Director: Dr Caitriona Carlin, Room ES209, Arts/Science Building.  
Email: [Caitriona.carlin@universityofgalway.ie](mailto:Caitriona.carlin@universityofgalway.ie)

(GY309) Financial Mathematics & Economics (1FM1)

Modules:

| Type | Choice       |    | ECTS | Code   | Module Title                              |
|------|--------------|----|------|--------|-------------------------------------------|
| Core | (1*15 + 9*5) | 60 | 15   | MA180  | Mathematics (Honours)                     |
|      |              |    | 5    | AY104  | Introduction to Financial Ac-<br>counting |
|      |              |    | 5    | CS103  | Computer Science                          |
|      |              |    | 5    | EC135  | Principles of Microeconomics              |
|      |              |    | 5    | EC136  | Principles of Macroeconomics              |
|      |              |    | 5    | EC1108 | Skills for Economics 1                    |
|      |              |    | 5    | MP191  | Mathematical Methods I                    |
|      |              |    | 5    | MA1993 | Mathematics of Finance                    |
|      |              |    | 5    | ST1111 | Probability Methods                       |
|      |              |    | 5    | ST1112 | Statistical Methods                       |
|      | Total        | 60 |      |        |                                           |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr Nina Snigireva, PHY152, Arts/Science Building, Ph:091-493639, Email: [nina.snigireva@universityofgalway.ie](mailto:nina.snigireva@universityofgalway.ie)

Mr. Cian Twomey, Room 204, 1st Floor, Cairnes Building, Ph: 091 493121, Email: [cian.twomey@universityofgalway.ie](mailto:cian.twomey@universityofgalway.ie), (Economics)

(GY310) Marine Science (1MR1)

Modules:

| Type     | Choice |    | ECTS | Code  | Module Title          |
|----------|--------|----|------|-------|-----------------------|
| Core     | (3*15) | 45 | 15   | BO101 | Biology               |
|          |        |    | 15   | CH101 | Chemistry             |
|          |        |    | 15   | PH101 | Physics               |
| Optional | (1*15) | 15 | 15   | MA180 | Mathematics (Honours) |
|          |        |    | 15   | CS102 | Computer Science      |
|          |        |    | 15   | MA161 | Mathematical Studies  |
|          |        |    | 15   | MP180 | Applied Mathematics   |
|          | Total  | 60 |      |       |                       |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

Where modules are indicated as Optional, students must select their preferred options as follows: One of: MA180: Mathematics (Honours)  
MA161: Mathematical Studies MP180: Applied Mathematics CS102: Computer Science

**First Year Co-ordinator:**  
Prof Mark Johnson, Room 202, Ryan Annexe, Ph: 091 495864,  
Email: mark.johnson@universityofgalway.ie

(GY313) Occupational Health & Safety Management (1OHM1)

Modules:

| Type     | Choice       |    | ECTS | Code   | Module Title                             |
|----------|--------------|----|------|--------|------------------------------------------|
| Core     | (2*15 + 3*5) | 45 | 15   | BO101  | Biology                                  |
|          |              |    | 15   | CP102  | Chemistry/Physics                        |
|          |              |    | 5    | PS3108 | Design Thinking                          |
|          |              |    | 5    | PH1105 | Environmental Health & Safety Practice 1 |
|          |              |    | 5    | LW3114 | Introduction to Law                      |
| Optional | (1*15)       | 15 | 15   | MA180  | Mathematics (Honours)                    |
|          |              |    | 15   | MA161  | Mathematical Studies                     |
|          | Total        | 60 |      |        |                                          |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

Where modules are indicated as Optional, students must select their preferred options as follows: One of: MA180: Mathematics (Honours) or MA161: Mathematical Studies

**Contacts:**  
Programme Director: Dr Marie Coggins, Room PHY233, Physics, School of Natural Sciences, Arts/Science Building, Ph: 091 495056.  
Email: marie.coggins@universityofgalway.ie

Administrator: Nicola Lynch, Room PHY222, Physics, School of Natural Sciences, Arts/Science Concourse Ph: 091 492770  
Email: nicola.lynch@universityofgalway.ie

(GY314) Earth and Ocean Sciences  
(1EH1)

Modules:

| Type | Choice              |    | ECTS | Code    | Module Title                         |
|------|---------------------|----|------|---------|--------------------------------------|
| Core | (3*15 + 1*10 + 1*5) | 60 | 15   | BO101   | Biology                              |
|      |                     |    | 15   | CH101   | Chemistry                            |
|      |                     |    | 15   | PH101   | Physics                              |
|      |                     |    | 5    | EOS1102 | Earth and Ocean Sciences for Society |
|      |                     |    | 10   | EOS2102 | The Earth from Core to Crust         |
|      | Total               | 60 |      |         |                                      |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr Shane Tyrrell, Earth and Ocean Sciences, School of Natural Sciences, Quadrangle Building Ph: 091 494387  
Email: [shane.tyrrell@universityofgalway.ie](mailto:shane.tyrrell@universityofgalway.ie)

(GY318) Biopharmaceutical  
Chemistry (1BPC1)

Modules:

| Type     | Choice |    | ECTS | Code  | Module Title          |
|----------|--------|----|------|-------|-----------------------|
| Core     | (3*15) | 45 | 15   | BO101 | Biology               |
|          |        |    | 15   | CH101 | Chemistry             |
|          |        |    | 15   | PH101 | Physics               |
| Optional | (1*15) | 15 | 15   | CS102 | Computer Science      |
|          |        |    | 15   | MA180 | Mathematics (Honours) |
|          |        |    | 15   | MA161 | Mathematical Studies  |
|          |        |    | 15   | MP180 | Applied Mathematics   |
|          | Total  | 60 |      |       |                       |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

Where modules are indicated as Optional, students must select their preferred options as follows:  
One of: CS102: Computer Science or MA180: Mathematics (Honours) or MA161: Mathematical Studies or MP180: Applied Mathematics

**Contacts:**  
Programme Director: Prof. Peter Crowley, Room 220, Chemistry, School of Biological and Chemical Sciences, Orbsen Building, Ph: 091 492480,  
Email: [peter.crowley@universityofgalway.ie](mailto:peter.crowley@universityofgalway.ie)

(GY319) Mathematical Science  
(1BMS1)

Modules:

| Type     | Choice     |    | ECTS | Code   | Module Title          |
|----------|------------|----|------|--------|-----------------------|
| Core     | 30 + (3*5) | 45 | 15   | MA180  | Mathematics (Honours) |
|          |            |    | 15   | MP180  | Applied Mathematics   |
|          |            |    | 5    | CS103  | Computer Science      |
|          |            |    | 5    | ST1111 | Probability Models    |
|          |            |    | 5    | ST1112 | Statistical Methods   |
| Optional | (1*15)     | 15 | 15   | BO101  | Biology               |
|          |            |    | 15   | CH101  | Chemistry             |
|          |            |    | 15   | PH101  | Physics               |
|          | Total      | 60 |      |        |                       |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

Where modules are indicated as Optional, students must select their preferred options as follows: One of: BO101: Biology CH101: Chemistry PH101: Physics  
Students are also expected to attend the Mathematical Science Seminar Series. Information regarding the schedule of events within the Mathematical Science Seminar Series will be provided via the 1BMS1 course Canvas page.

**Contacts:**  
Dr Martin Meere, Room ADB-G005, Áras de Brún, Ph: 091 493087,  
Email: martin.meere@universityofgalway.ie

(GY320) Physics (Applied,  
Astrophysics, Biomedical,  
Climate, Theoretical) (1PHO1)

Modules:

| Type     | Choice |    | ECTS | Code   | Module Title          |
|----------|--------|----|------|--------|-----------------------|
| Core     | (3*15) | 45 | 15   | PH101  | Physics               |
|          |        |    | 15   | PH1104 | Frontiers in Physics  |
|          |        |    | 15   | MP180  | Applied Mathematics   |
| Optional | (1*15) | 15 | 15   | MA180  | Mathematical (Honours |
|          |        |    | 15   | MA161  | Mathematical Studies  |
|          | Total  | 60 |      |        |                       |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

Where modules are indicated as Optional, students must select their preferred options as follows:  
One of: MA180: Mathematics (Honours) or MA161: Mathematical Studies

**Contacts:**  
Dr. Alexander Goncharov, Physics, School of Natural Sciences, Arts/Science Building, Ph: 091 495189, Email: alexander.goncharov@universityofgalway.ie

(GY321) Genetics and Genomics  
(1BGG1)

Modules:

| Type | Choice       |    | ECTS | Code   | Module Title                                      |
|------|--------------|----|------|--------|---------------------------------------------------|
| Core | (3*15 + 3*5) | 30 | 15   | BO101  | Biology                                           |
|      |              |    | 15   | CH101  | Chemistry                                         |
|      |              |    | 15   | MA180  | Mathematics                                       |
|      |              |    | 5    | BI1101 | Introduction to Genetics & Genom-ics              |
|      |              |    | 5    | BI1103 | Genetics and Genomics: Research and Communication |
|      |              |    | 5    | CS1101 | Introduction to Programming                       |
|      | Total        | 60 |      |        |                                                   |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr Elaine Dunleavy, Ground Floor North, Biomedical Sciences Building, Ph: 091 494046,  
Email: [elaine.dunleavy@universityofgalway.ie](mailto:elaine.dunleavy@universityofgalway.ie)

Deputy Programme Director: Prof. Derek Morris, Room 106, Biochemistry, School of Biological and Chemical Sciences, Arts/Science Building, Ph: 091 494439, email: [derek.morris@universityofgalway.ie](mailto:derek.morris@universityofgalway.ie)

(GY322) Agricultural Science (1AGS1)

Modules:

| Type | Choice       |    | ECTS | Code    | Module Title                              |
|------|--------------|----|------|---------|-------------------------------------------|
| Core | (3*15 + 3*5) | 60 | 15   | BO101   | Biology                                   |
|      |              |    | 15   | CH101   | Chemistry                                 |
|      |              |    | 15   | PH101   | Physics                                   |
|      |              |    | 5    | AG1101  | Introduction to Agricultural Science      |
|      |              |    | 5    | DEV1100 | Introduction to Sustainable Development I |
|      |              |    | 5    | DEV1102 | Introduction to Sustainable Agriculture   |
|      | Total        | 60 |      |         |                                           |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr. David Styles, Email: [david.styles@universityofgalway.ie](mailto:david.styles@universityofgalway.ie)

(GY323) Zoology (1ZOO1)

Modules:

| Type | Choice              |    | ECTS | Code    | Module Title                  |
|------|---------------------|----|------|---------|-------------------------------|
| Core | (3*15 + 1*10 + 1*5) | 60 | 15   | BO101   | Biology                       |
|      |                     |    | 15   | CH101   | Chemistry                     |
|      |                     |    | 15   | PH101   | Physics                       |
|      |                     |    | 10   | EOS2102 | The Earth: From Core to Crust |
|      |                     |    | 5    | ZO1105  | Careers in Zoology            |
|      | Total               | 60 |      |         |                               |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr Colin Lawton, Head of Zoology, School of Natural Sciences, Ph: 091 492335, Email: [colin.lawton@universityofgalway.ie](mailto:colin.lawton@universityofgalway.ie)

(GY350) Computer Science (1BCT1)

Modules:

| Type     | Choice       | ECTS | Code   | Module Title                                          |
|----------|--------------|------|--------|-------------------------------------------------------|
| Core     | (4*5 + 3*10) | 5    | EE130  | Fundamentals of Electrical & Electronic Engineering 1 |
|          |              | 5    | CT1114 | Web Development                                       |
|          |              | 5    | PH150  | Introduction to Physics                               |
|          |              | 10   | CT101  | Computing Systems                                     |
|          |              | 10   | CT102  | Algorithms & Information Systems                      |
|          |              | 10   | CT103  | Programming                                           |
|          |              | 5    | CT1112 | Professional Skills I                                 |
|          |              |      |        |                                                       |
| Optional | (1*10)       | 10   | MA160  | Mathematics                                           |
|          |              | 10   | MA190  | Mathematics (honours)                                 |
|          | Total        | 60   |        |                                                       |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

Where modules are indicated as Optional, students must select their preferred options as follows:  
One of: MA160: Mathematics or MA190: Mathematics (Honours)

**Contacts:**  
Programme Director: Dr. Colm O’Riordan, 3rd floor, Computer Science Building, Ph: 091 493669, Email: [colm.oriordan@universityofgalway.ie](mailto:colm.oriordan@universityofgalway.ie)

Programme Administrator: Geraldine Healy, 3rd floor Computer Science Building, Ph: 091 493835, Email: [Computerscience@universityofgalway.ie](mailto:Computerscience@universityofgalway.ie)

(GY401) Engineering  
(Undenominated) (1EG1)

Modules:

| Type  | ECTS | Code   | Module Title                     |
|-------|------|--------|----------------------------------|
| Core  | 5    | CH140  | Engineering Chemistry            |
|       | 5    | CT1110 | Engineering Computing I          |
|       | 5    | EI160  | Engineering Graphics             |
|       | 5    | MA140  | Engineering Calculus             |
|       | 5    | MP120  | Engineering Mechanics            |
|       | 5    | CT1111 | Engineering Computing II         |
|       | 10   | EI150  | Engineering Design               |
|       | 5    | MM140  | Engineering Mathematical Methods |
|       | 5    | PH140  | Engineering Physics              |
|       | 10   | EI140  | Fundamentals of Engineering      |
| Total | 60   |        |                                  |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr Edelle Doherty. ENG-1023 Alice Perry Engineering Building, Ph: 091 492733, Email: [edelle.doherty@universityofgalway.ie](mailto:edelle.doherty@universityofgalway.ie)  
  
Programme Administrator: Serena Lawless, ENG-1046, Alice Perry Engineering Building, Ph: 49 2170, Email: [serena.lawless@universityofgalway.ie](mailto:serena.lawless@universityofgalway.ie)

(GY402) Civil Engineering (1BE1)

Modules:

| Type  | ECTS | Code   | Module Title                     |
|-------|------|--------|----------------------------------|
| Core  | 5    | CH140  | Engineering Chemistry            |
|       | 5    | CT1110 | Engineering Computing I          |
|       | 5    | EI160  | Engineering Graphics             |
|       | 5    | MA140  | Engineering Calculus             |
|       | 5    | MP120  | Engineering Mechanics            |
|       | 5    | CT1111 | Engineering Computing II         |
|       | 10   | EI150  | Engineering Design               |
|       | 5    | MM140  | Engineering Mathematical Methods |
|       | 5    | PH140  | Engineering Physics              |
|       | 10   | EI140  | Fundamentals of Engineering      |
| Total | 60   |        |                                  |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr. Patrick McGetrick, ENG-1040 Alice Perry Engineering Building, Ph: 091 492571, Email: [patrick.mcgetrick@universityofgalway.ie](mailto:patrick.mcgetrick@universityofgalway.ie)  
  
Programme Administrator: Victoria Mossman, ENG-1046 , Alice Perry Engineering Building Email: [Victoria.mossman@universityofgalway.ie](mailto:Victoria.mossman@universityofgalway.ie)

(GY405) Mechanical Engineering  
(1BM1)

Modules:

| Type  | ECTS | Code   | Module Title                     |
|-------|------|--------|----------------------------------|
| Core  | 5    | CH140  | Engineering Chemistry            |
|       | 5    | CT1110 | Engineering Computing I          |
|       | 5    | EI160  | Engineering Graphics             |
|       | 5    | MA140  | Engineering Calculus             |
|       | 5    | MP120  | Engineering Mechanics            |
|       | 5    | CT1111 | Engineering Computing II         |
|       | 10   | EI150  | Engineering Design               |
|       | 5    | MM140  | Engineering Mathematical Methods |
|       | 5    | PH140  | Engineering Physics              |
|       | 10   | EI140  | Fundamentals of Engineering      |
| Total | 60   |        |                                  |

Note:

Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

Contacts:

Programme Director: Richard Barrett, ENG-2030, Alice Perry Engineering Building, Ph: 091 492792, Email: richard.barrett@universityofgalway.ie.

Programme Administrator: Bríd Eileanór Ní Chonaill, ENG-2050 Alice Perry Engineering Building. Ph: 091 492223, Email: mecheng@universityofgalway.ie

(GY406) Electronic & Computer  
Engineering (1BP1)

Modules:

| Type  | ECTS  | Code                        | Module Title                     |
|-------|-------|-----------------------------|----------------------------------|
| Core  | 5     | CT1110                      | Engineering Computing I          |
|       | 5     | EI160                       | Engineering Graphics             |
|       | 5     | MA140                       | Engineering Calculus             |
|       | 5     | MP120                       | Engineering Mechanics            |
|       | 5     | CT1111                      | Engineering Computing II         |
|       | 10    | EI150                       | Engineering Design               |
|       | 5     | MM140                       | Engineering Mathematical Methods |
|       | 5     | PH140                       | Engineering Physics              |
|       | 10    | EI140                       | Fundamentals of Engineering      |
|       | EI140 | Fundamentals of Engineering | Fundamentals of Engineering      |
| Total | 60    |                             |                                  |

Note:

Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

Contacts:

Programme Director: Dr Adnan Elahi, ENG-3048 Alice Perry Engineering Building, Ph: 091 493538, Email: adnan.elahi@universityofgalway.ie

Programme Administrator: Mary Costello, ENG-3050 Alice Perry Engineering Building, Ph:49 2728, Email: mary.costello@universityofgalway.ie

(GY408) Biomedical Engineering  
(1BG1)

Modules:

| Type  | ECTS | Code   | Module Title                     |
|-------|------|--------|----------------------------------|
| Core  | 5    | CH140  | Engineering Chemistry            |
|       | 5    | CT1110 | Engineering Computing I          |
|       | 5    | EI160  | Engineering Graphics             |
|       | 5    | MA140  | Engineering Calculus             |
|       | 5    | MP120  | Engineering Mechanics            |
|       | 5    | CT1111 | Engineering Computing II         |
|       | 10   | EI150  | Engineering Design               |
|       | 5    | MM140  | Engineering Mathematical Methods |
|       | 5    | PH140  | Engineering Physics              |
|       | 10   | EI140  | Fundamentals of Engineering      |
| Total | 60   |        |                                  |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr. Jamie Concannon, ENG-3025, Alice Perry Engineering Building. Ph: 091-494125 Email: [jamie.concannon@universityofgalway.ie](mailto:jamie.concannon@universityofgalway.ie)  
  
Programme Administrator: Aisling Rooney, Alice Perry Engineering Building. Email: [aisling.rooney@universityofgalway.ie](mailto:aisling.rooney@universityofgalway.ie)

(GY410) Project & Construction  
Management (1BCM1)

Modules:

| Type  | ECTS | Code   | Module Title                                      |
|-------|------|--------|---------------------------------------------------|
| Core  | 5    | AY104  | Introduction to Financial Accounting              |
|       | 5    | CT1110 | Engineering Computing I                           |
|       | 5    | EI160  | Engineering Graphics                              |
|       | 5    | MG3116 | Management, Enterprise & Society                  |
|       | 5    | AY105  | Management & Enterprise                           |
|       | 5    | CE119  | Fundamentals of Project & Construction Management |
|       | 5    | PH150  | Introduction to Physics                           |
|       | 15   | CE141  | Introduction to Engineering & Design              |
|       | 10   | MA1161 | Mathematical Studies                              |
|       | 10   | EI140  | Fundamentals of Engineering                       |
| Total | 60   |        |                                                   |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr. Indiana Olbert, ENG-1022 Alice Perry Engineering Building, Ph: 091 493208, Email: [indiana.olbert@universityofgalway.ie](mailto:indiana.olbert@universityofgalway.ie)  
  
Programme Administrator: Victoria Mossman, ENG-1046 Alice Perry Engineering Building, Email: [victoria.mossman@universityofgalway.ie](mailto:victoria.mossman@universityofgalway.ie)

(GY413)Energy Systems  
Engineering (1BSE1)

Modules:

| Type  | ECTS | Code   | Module Title                     |
|-------|------|--------|----------------------------------|
| Core  | 5    | CH140  | Engineering Chemistry            |
|       | 5    | CT1110 | Engineering Computing I          |
|       | 5    | EI160  | Engineering Graphics             |
|       | 5    | MA140  | Engineering Calculus             |
|       | 5    | MP120  | Engineering Mechanics            |
|       | 5    | CT1111 | Engineering Computing II         |
|       | 10   | EI150  | Engineering Design               |
|       | 5    | MM140  | Engineering Mathematical Methods |
|       | 5    | PH140  | Engineering Physics              |
|       | 10   | EI140  | Fundamentals of Engineering      |
| Total | 60   |        |                                  |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr Magdalena Hajdukiewicz, ENG-2038 Alice Perry Engineering Building, Email: [magdalena.hajdukiewicz@universityofgalway.ie](mailto:magdalena.hajdukiewicz@universityofgalway.ie)

Programme Administrator: Deirdre Duane, ENG-1046, Alice Perry Engineering Building, Email: [energyeng@universityofgalway.ie](mailto:energyeng@universityofgalway.ie)

(GY414)Electrical & Electronic  
Engineering (1BLE1)

Modules:

| Type  | ECTS | Code   | Module Title                     |
|-------|------|--------|----------------------------------|
| Core  | 5    | CH140  | Engineering Chemistry            |
|       | 5    | CT1110 | Engineering Computing I          |
|       | 5    | EI160  | Engineering Graphics             |
|       | 5    | MA140  | Engineering Calculus             |
|       | 5    | MP120  | Engineering Mechanics            |
|       | 5    | CT1111 | Engineering Computing II         |
|       | 10   | EI150  | Engineering Design               |
|       | 5    | MM140  | Engineering Mathematical Methods |
|       | 5    | PH140  | Engineering Physics              |
|       | 10   | EI140  | Fundamentals of Engineering      |
| Total | 60   |        |                                  |

*Note:*  
Where modules are indicated as Core, students will be automatically registered for these modules by the registration system and do not have to select them.

**Contacts:**  
Programme Director: Dr. Maeve Duffy, ENG-3046 Alice Perry Engineering Building, Ph: 091 493972, Email: [maeve.duffy@universityofgalway.ie](mailto:maeve.duffy@universityofgalway.ie)

Programme Administrator: Mary Costello, ENG-3050 Alice Perry Engineering Building, Ph: 091 492728, Email: [mary.costello@universityofgalway.ie](mailto:mary.costello@universityofgalway.ie)

# Timetables

Programme timetables can be found here:



# Regulations for Courses of Study and Examinations

After satisfying both programme entry and CAO Point requirements, undergraduate students in the College of Science & Engineering can attend a course of study over at least four years leading to the award of an Honours degree (NFQ Level 8), provided they have registered for one of the following degree programmes:

- 1. BE Civil Engineering
- 2. BE Biomedical Engineering
- 3. BE Electrical & Electronic Engineering
- 4. BE Electronic & Computer Engineering
- 5. BE Mechanical Engineering
- 6. BE Energy Systems Engineering
- 7. BSc Computer Science & Information Technology
- 8. BSc Project & Construction Management
- 9. BSc Science
- 10. BSc Agricultural Science
- 11. BSc Biomedical Science
- 12. BSc Biopharmaceutical Science
- 13. BSc Biotechnology
- 14. BSc Earth & Ocean Sciences
- 15. BSc Environmental Science
- 16. BSc Occupational Health & Safety Management
- 17. BSc Financial Mathematics & Economics
- 18. BSc Genetics & Genomics
- 19. BSc Marine Science
- 20. BSc Mathematical Science
- 21. BSc Physics
- 22. BSc Zoology

Students will also be admitted to the First-Year programme BE Engineering (Undenominated). On successful completion of the First-Year University Examinations in Engineering (Undenominated), students may progress to one of the following programmes:

- BE in Civil Engineering
- BE in Biomedical Engineering
- BE in Electrical & Electronic Engineering
- BE in Electronic & Computer Engineering
- BE in Mechanical Engineering
- BSc in Computer Science & Information Technology
- BE in Energy Systems Engineering
- BSc in Project & Construction Management

The School of Engineering Programme and Transfer Sub-committee will endeavour to allocate places in accordance with the first choices of the students. If demand for a particular programme exceeds the number of places available, students will receive offers for that programme in accordance with their overall performance at the First-Year University Examination in Engineering. Additional requirements may be set out by the School of Engineering.

Programme and Module Requirements:  
In each year of a degree programme, students must register for modules to a total credit value of 60 ECTS. The schedule of modules for each programme is available on the College of Science and Engineering website.

The number of students to be admitted to any module in the College will be determined by the availability of places. If necessary, entry into a module in Second Year, Third Year, or Fourth Year will be determined by the overall performance at the previous-year examination.

Students are required to engage fully in all module activities, e.g., lectures, practicals, fieldwork, tutorials, assignments/homework, in-class tests, classroom response systems (where in use), and exams.

In addition to attendance at lectures, practicals and other work during university terms, students may be required to attend for fieldwork or complete a professional experience placement in a specified area relevant to their programme of study during university vacations. Arrangements in relation to fieldwork or professional experience will be coordinated by the school concerned.

Where placements form part of the programme they must be passed outright and cannot be passed by compensation. The timing of placements will vary depending on the course of study. On a number of programmes placements are graded Pass/Fail and these Pass/Fail results are omitted from the overall calculation for the year. Details of all non-compensatable Science and Engineering modules are listed in the following table;

| Course Instance                                      | Module Code | Description                                                              |
|------------------------------------------------------|-------------|--------------------------------------------------------------------------|
| 3BCM1                                                | CE3108      | Professional Experience Programme in Project and Construction Management |
| 3BE4                                                 | CE3110      | Professional Experience Programme in Civil Engineering                   |
| 3BM1                                                 | ME3107      | Machine Design Project                                                   |
| 3BM4                                                 | ME3109      | Mechanical Engineering Professional Experience Programme                 |
| 3BP1 & 3BLE1, 3BLE3, 3BLE6, 3BLE7, 3BP3, 3BP6 & 3BP7 | EE3126      | 3rd Year Project                                                         |
| 3BP4, 3BLE4, 4BLE1, 4BP1, 3BLE7, 4BLE6, 3BP7 & 4BP6  | EE3127      | Electrical & Electronic Discipline BE Professional Experience Programme  |
| 3BSE1                                                | CE3118      | Design of Energy Systems for the Built Environment                       |
| 3BSE1 & 3BSE4                                        | EE3125      | Energy Systems Electrical Design project                                 |
| 3BSE4                                                | EG3106      | Energy Systems B.E. Professional Experience Programme                    |
| 4BE1                                                 | CE4104      | Professional Experience Programme in Civil Engineering                   |
| 4BG1                                                 | BME4107     | Biomedical Professional Experience Programme (BE+ME)                     |
| 4BG4                                                 | BME4108     | Biomedical Professional Experience Programme Programme 4 Year BE         |
| 4BG4                                                 | BME4102     | Biomedical Engineering Project                                           |
| 4BM1                                                 | ME4111      | Mechanical Engineering Professional Experience Programme                 |
| 4BM4                                                 | ME4103      | Mechanical Engineering Final Year Project                                |
| 4BP4                                                 | CT434       | Electronic & Computer Engineering Project                                |
| 4BP4, 4BLE4, 4BLE6 & 4BP6                            | EE443       | BE Project                                                               |
| 4BSE1                                                | EG4101      | Energy Systems M.E. Professional Experience Programme                    |
| 4EHS1                                                | PH4110      | OHM Final Year Project                                                   |

Time Limits:

A time limit of two years applies to the successful completion of examinations in each year of a programme. These are detailed in the University of Galway Undergraduate Marks and Standards.

Students failing to complete examinations within the specified periods will be ineligible to proceed further towards their degree in this University.

Students may have the option to exit their degree programme with an ordinary BSc/ BTech Degree (NFQ Level 7) once their Third-Year examinations have been passed as a whole.

Grading Scheme:

Offical marks are not available for Semester-1 assessments until after the First-Sitting/ Summer Exam Board Meeting which usually takes place in June. Provisional grades for Semester-1 modules are however made available to students early in Semester 2 and follow the grade scheme below.

| Percentage | Grade |
|------------|-------|
| 70 - 100   | A     |
| 60 - 69    | B     |
| 50 - 59    | C     |
| 40 - 49    | D     |
| 35 - 39    | E+    |
| 30 - 34    | E-    |
| 0 - 29     | F     |

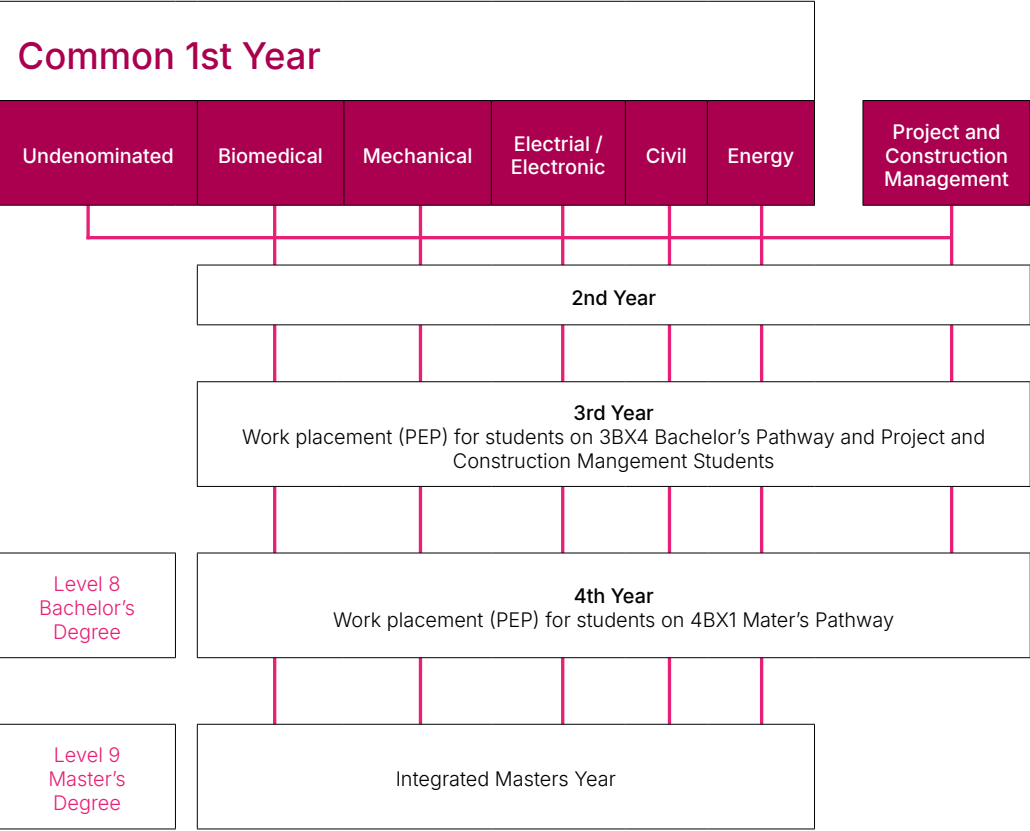
These grades are provisional only and and are subject to correction until they are confirmed at the Summer Exam Board Meeting, after which results are released formally to students with a transcript including marks for each module and an overall calculation for the year."

Progression to the Next Year:

General details on progression are contained in the University of Galway Undergraduate Marks and Standards. Two programmes require some explanation and more details provided here.

1.The GY301 Bachelor of Science degree progression structure includes allocation of students to pathways of study upon progressing to Second Year in a process which combines the stated preferences of students and student performance at first year examinations in order to fairly distribute places in pathways, particularly where a limiting quota of places apply.

2.Progression in Engineering programmes that incorporate an Integrated Masters Year is displayed in the diagram on page 49. For Years 1 to 4 of the programme, Undergraduate Marks and Standards apply. For Year 5 of the programme, Postgraduate Marks and Standards apply. In order to progress to the Integrated Masters Year, students must attain an overall grade of at least H2.2 (Second Class Honours Grade 2) in the Level-8 Bachelors degree awarded on completion of Year 4 of the programme.



### Academic Integrity

In response to the challenges this changing academic integrity landscape brings, the University of Galway approved a new Academic Integrity Policy in 2022. This is available here: [universityofgalway.ie/academicintegrity](https://www.universityofgalway.ie/academicintegrity)

### Marks and Standards

The University Marks and Standards are a set of Examination Regulations and are available at the following website: [www.universityofgalway.ie/exams/policies-procedures/](https://www.universityofgalway.ie/exams/policies-procedures/).

Laboratories, fieldwork, continuous assessments and projects are not normally repeatable in the same academic year.

### Science Programmes Regulations – Sub-module Components

(applying to GY301, GY303, 304, 308, 309, 310, 313, 314, 318, 319, 320, 321, 322)

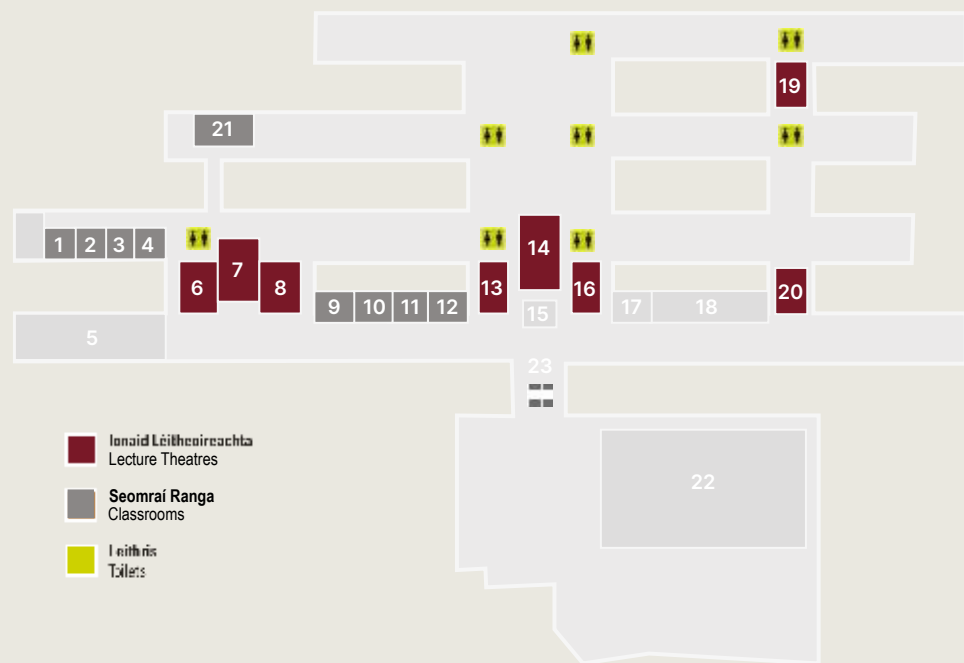
In addition to having to obtain an overall module mark of at least 40% in a 15-credit First-Year module in Science programmes, a student must obtain at least 35% of the module's continuous assessment mark in order to pass the module. Where a module is assessed on the basis of 60% for written exams and 40% for continuous assessment, this equates to obtaining at least 14 of the 40% awarded for continuous assessment.

There is no opportunity to complete or retake continuous assessment in the period between the Summer examinations and the Autumn examinations. Accordingly, a student who fails to obtain a mark of at least 35% in the continuous assessment component of a 15-credit First-Year module at the Summer examinations cannot pass the module at the Autumn sitting and must re-register for the module as a First-Year repeat student the following year. A student repeating a module the following year must re-engage in all parts of the module.

## Scholarships and Prizes

A wide range of scholarships and prizes are available to current and potential students in the College of Science and Engineering.  
[universityofgalway.ie/science-engineering/scholarships/](https://www.universityofgalway.ie/science-engineering/scholarships/)

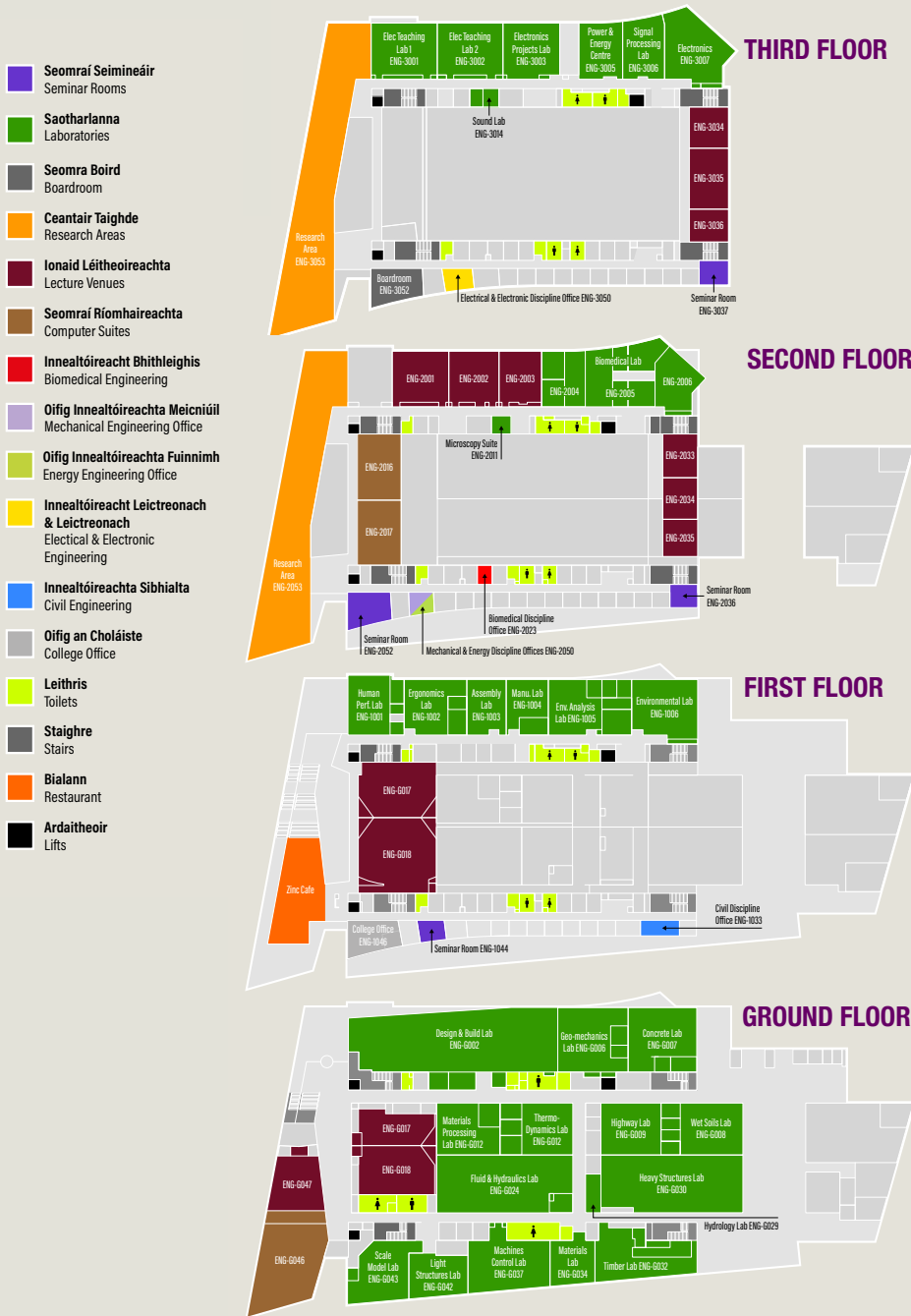
Foirgneamh na nDán / Na hEolaíochta  
Arts / Science Building



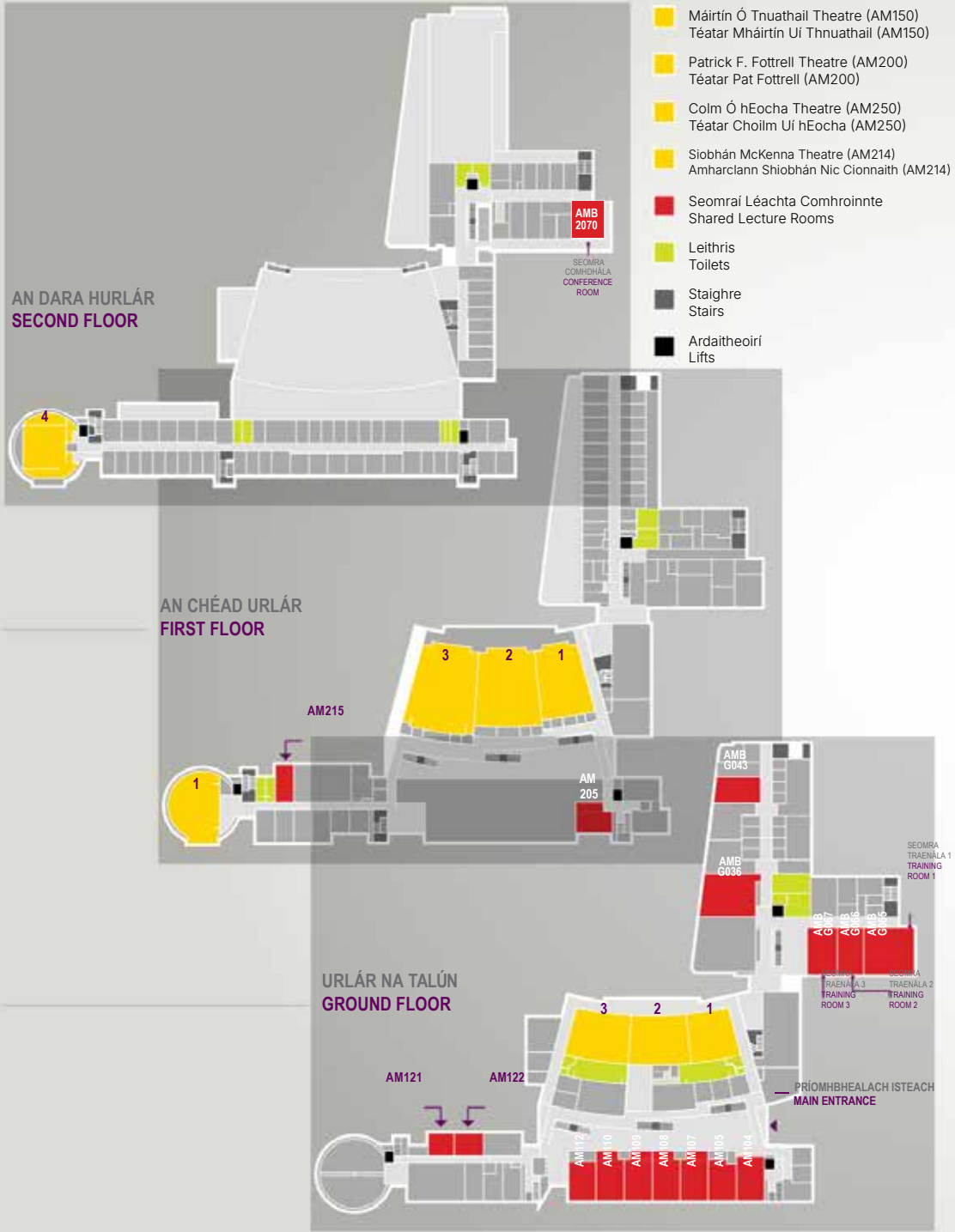
- Ionaid Léitheoireachta  
Lecture Theatres
- Seomraí Ranga  
Classrooms
- Leithris  
Toilets

- |                                    |                                               |
|------------------------------------|-----------------------------------------------|
| 1. AC216                           | 13. SC002 Joseph Larmour Theatre              |
| 2. AC215                           | 14. SC001 Richard Kirwan Theatre              |
| 3. AC214                           | 15. Student Information                       |
| 4. AC213                           | 16. SC003 Thomas Dillon Theatre               |
| 5. Bank                            | 17. Ideas Lab                                 |
| 6. AC002 Emily Anderson Theatre    | 18. Smokie's Cafe                             |
| 7. AC003 D'arcy Thompson Theatre   | 19. SC005 Tyndall Theatre                     |
| 8. AC001 Ruairi O'Flaherty Theatre | 20. SC004 Charles McMunn Theatre              |
| 9. AC204                           | 21. River Room                                |
| 10. AC203                          | 22. Library                                   |
| 11. AC202                          | 23. Stairs to An Bhalann Restaurant and Shops |
| 12. AC201                          |                                               |

Foirgneamh na hInnealtóireacht Alice Perry  
Alice Perry Engineering Building



Áras Dán na Mílaoise (AM/AMB)  
Arts Millennium Building (AM/AMB)



## College of Science and Engineering

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[universityofgalway.ie/science-engineering/](http://universityofgalway.ie/science-engineering/)