Maynooth University Department of Biology

First Year Introductory Manual 2021-2022

Maynooth University
National University of Ireland Maynooth

Maynooth University Biology Department:

Aims of the department

To enhance students' knowledge and understanding of important concepts in the Biological Sciences and to develop their analytical, practical and communication skills and appreciation of environmental and other bioethical issues.

Our commitment to equality, diversity, and inclusion.

The Maynooth University Biology department is committed to equality, diversity and inclusion. We are proud to have been the first department in the University to receive an externally validated Athena Swan Bronze Department Award for our approaches and we are working hard to achieve Siler. We look forward to engaging with all members (students and staff) of the department as we implement our Gender Equality Action Plan.

In line with our equality diversity and inclusion focus, we will continue to seek input from the student population (through surveys and focus groups) and will endeavor to keep you informed of our progress in this area.

For more information on the Biology department's Gender Equality Action Plan, see https://www.maynoothuniversity.ie/biology/athena-swan or contact Dr. Mark Robinson (Biology Athena SWAN Committee Chair) at Mark.Robinson@mu.ie

September 2021
Biology Department Athena SWAN Committee

Table of Contents

Dates for Commencement 3

University Support Services 4

Staff Consultation Times 6

First Year Module Coordinators 7

Staff Research Interests 8

Courses 11

Examination & Continual Assessment 17

McGraw Hill Connect Registration Instructions 18

Student Information 19

Laboratory Practical Arrangements 22

Requirement for Practicals 23

Biology Laboratory Safety 28

Notification of Absence 30

Absence from MCQs/LOAs 33

Preparation for Examination 34

Experiential Learning in Maynooth 35

How to fail in First Year in University 36

Information on Plagiarism 37

Biochemical Calculations Website: BiochemicalcTM 39

Maynooth University Department of Biology
INFORMATION FOR FIRST YEAR STUDENTS 2021-2022

Please read these notes carefully and keep them safely so that you can refer to them during the year.

The Biology staff extends a warm welcome to all First Years; we hope you will enjoy the time spent in the Department of Biology.

AIMS OF THE DEPARTMENT OF BIOLOGY

To enhance student's knowledge and understanding of important concepts in the Biological sciences and to develop their analytical, practical and communication skills and appreciation of environmental and other bioethical issues.

Calendar 2021 – 2022

FIRST SEMESTER

Thursday 16th September	First-Year Registration opens
Monday 20th September to Friday 24th September	First Year Orientation
Monday 27th September	Lectures commence (BI101 Online, BI103 In-class)
Monday 25th October to Friday29 October	Study Week
Monday 1st November	Resumption of Lectures
Friday 17th December	Conclusion of First Semester Lectures
Monday 20st December to Friday 31st December	Christmas Vacation
Monday3rd January to Thursday 6th January	Study Period
Not before Friday 7th January	Examination period commences

SECOND SEMESTER

Monday 31st January	Lectures resume
Monday 14th March to Friday 18th March	Study Week
Monday 18th April to Friday 22nd April	Easter Vacation
Monday 25th April	Resumption of Lectures
Friday 6th May	Conclusion of Second Semester
Monday 9th to Thursday 12th May	Study Period
Not before Friday 13th May	Examination period commences

Students can change their **First Semester Selections in the first THREE weeks of Semester 1 and in the first TWO weeks of Semester Two for all Second Semester Selections.**

Changes **will not be made after these deadlines** and students will have to take the modules they had initially registered for on the University System.

University Supports and Services

Academic Advisory Office
The Academic Advisory Office offers a convenient first point of contact for students who wish to seek advice or assistance with their general experience of University life. The office provides an ombudsman-like role for students who may be encountering difficulties in their programme of study.
Academic Advisory Office

Examination Office
The Examinations Office is part of the University Registry and administers the examination timetable. It is responsible for the central administration of the University written examinations. The academic year is semesterised with examinations held in Semester One (January) and Semester Two (May) with a Supplemental/Resit autumn session in August.
Examination Office

Student Health Centre
The Student Health Centre is an acute care/advisory service. The service is envisaged as an addition to the student's own family doctor or specialist medical service. It operates within resource constraints so certain service limitations apply. Students should continue to attend their own general practitioner.
Student Health Centre

Student Services
Student Services is an integral part of the University community, enabling the promotion and development of its educational mission. Using a holistic approach, we offer a range of clearly defined services to support and empower students to achieve their personal and academic potentials and so enhance their life's journey. We strive to create a community which is open and caring and where diversity is expected and respected."
Student Services

Maynooth Access Programme
The Maynooth University Access Programme (MAP) encourages under-represented groups to enter third level and provides these groups with support through their time at Maynooth. These groups include under-represented school leavers, mature students, students with disabilities and members of the Irish Traveller community.
Maynooth University Access Programme

Map of Campus
Callan Building
Bioscience Building
Campus Map

MU Library
MU Library is a popular place to meet, study and research in with a variety of study spaces, meeting rooms and a Starbucks located on the ground floor. It provides bookable group study rooms for students as well as a postgraduate room on Level 2. It's also a portal to a vast collection of Biology resources in print and online through its searchable catalogue. The library homepage has a comprehensive range of information, training, supports and services that you can explore: https://www.maynoothuniversity.ie/library but there's also a dedicated Biology subject guide on our webpage that we recommend you use and bookmark, because we highlight new Biology-specific material and news regularly in this space for undergraduates, postgraduates and academics. We've developed a "New2MU" link that contains lots of information specific to those starting out in MU for the first time, from undergraduates to postgraduates.
https://www.maynoothuniversity.ie/library

Programme Advisory Office

For Programme choices and options information

The Programme Advisory Office, within the Office of the Dean of Teaching and Learning, is available to advise you on any choices you might have to make related to your programme including subject choice. The Programme Advisory Office acts as a guide to students as you navigate your own way through your programme options. The Programme Advisory Office consists of the Programme Advisor, Caitriona McGrattan, who is supported by a team of PG students during peak times.

The Programme Advisory Office can be contacted via
Email: programme.choices@mu.ie
Telephone: 01 474 7428
Please see their website for information about meeting a member of the Programme Advisory Team:
https://www.maynoothuniversity.ie/programme-advisory-office

Timetable 2021/2022

1st Year timetable

Maynooth University Department of Biology
Staff Consultation Times

Teaching Staff	Phone ext*	Room	E-mail	Consultation Time
Dr. Özgür Bayram	6879	2.31	ozgur.bayram@mu.ie	Tuesday 11.00-13.00
Dr. Marion Butler	3856	B3.18	marion.butler@mu.ie	Monday 11.30-13.30
Dr. Jim Carolan	6367	2.29	james.carolan@mu.ie	Monday 11.00-14.00
Dr. Noreen Curran	3834	1.18	noreen.curran@mu.ie	Friday after lecture
Dr John Devaney	6117	2.27	john.devaney@mu.ie	Monday 11.00 - 13.00
Dr. Paul Dowling	6368	2.35	paul.dowling@mu.ie	Tuesday 11.00-13.00
Prof. Sean Doyle	3858	1.24**	sean.doyle@mu.ie	Tuesday 10.00-11.30
Dr. Karen English	6290	B3.17	karen.english@mu.ie	Monday 14.00-16.00
Dr. David Fitzpatrick	6844	1.26**	david.fitzpatrick@mu.ie	Monday 15.00-16.30
Dr. Emmanuelle Graciet	6255	B1.25	emmanuelle.graciet@mu.ie	Tuesday 10.00-12.00
Prof. Christine Griffin	3841	2.36	christine.griffin@mu.ie	Tuesday 11.00-13.00
Dr. Andy Hogan	6118	B2.16	andrew.e.hogan@mu.ie	***by appointment***
Prof. Kevin Kavanagh	3859	2.39	kevin.kavanagh@mu.ie	Mon & Wed 14.00-16.00
Dr. Lorna Lopez		2.25	lorna.lopez@mu.ie	Tuesday 11.00 - 13.00
Dr. Gail Maher	7496	F6	abigail.maher@mu.ie	Tuesday 11.00-12.00
Prof. Bernard Mahon	3835	B2.15	bernard.mahon@mu.ie	Monday 09.00-11.00
Dr. Joanne Masterson	6369	B2.17	joanne.masterson@mu.ie	Monday 14.00-16.00 (Sem 2
Dr. Eoin McNamee	6148	B2.19	eoin.n.mcnamee@mu.ie	Monday 10.00-11.30
Dr. Conor Meade	6386	2.34	conor.meade@mu.ie	Monday 12.00-13.00
Dr. Sinead Miggin	3855	B3.14	sinead.miggin@mu.ie	Tuesday 12.00-14.00
Prof. Paul Moynagh *Head of Department*	6105	B3.15	paul.moynagh@mu.ie	Monday 14.00-16.00
Dr. Jackie Nugent	3857	B1.23	jackie.nugent@mu.ie	Monday 10.00-12.00
Prof. Kay Ohlendieck	3842	2.33	kay.ohlendieck@mu.ie	Monday 12.00-13.00
Dr. Rebecca Owens	3839	2.30	rebecca.owens@mu.ie	Wednesday 10 -11.30 Sem 2
Ms. Teresa Redmond		1.21**	teresa.redmond@mu.ie	During practical classes
Dr. Mark Robinson	3860	B1.21	mark.robinson@mu.ie	Wednesday 14.30-15.30
Dr. Martina Schroeder	6853	B2.18	martina.schroeder@mu.ie	***by appointment***
Dr. Fiona Walsh	**7246**	B1.24	fiona.walsh@mu.ie	Thursday 11.30-12.30

*Phone prefix: **(01) 708 *except*** numbers in **red which are prefixed by (01) 474…**
**=Located on ground floor Callan Building; F=Located in Foyer, 1st floor Callan Building; B=Biosciences & Electronic Engineering Building

The times when staff are normally available for consultation are given above. Appointments for other times must be arranged with individual lecturers.

Administrative Offices 2.40,2.41 open daily: 10am-12.45pm; 2-4pm Office e-mail: biology.department@mu.ie

Programme Coordinators:

OMNIBUS SCIENCE:	Dr. Jackie Nugent
BIOTECHNOLOGY:	Prof. Sean Doyle
SCIENCE EDUCATION:	Dr. Jackie Nugent
BIOLOGICAL & BIOMEDICAL SCIENCE:	Prof. Kevin Kavanagh
INTERNATIONAL COORDINATOR	Dr. Paul Dowling
MAP (MATURE AND ACCESS STUDENTS) ACADEMIC ADVISOR:	Dr. Joanne Masterson
POSTGRADUATE COORDINATOR:	Dr. Martina Schroeder
MSC IN IMMUNOLOGY & GLOBAL HEALTH:	Dr. Sinead Miggin

For urgent matters the Programme Coordinators and/or Head of Department may be contacted in their rooms at any time. Please contact biology.department@mu.ie to make an appointment.

First Year Module Coordinators:

CODE	NAME	Coordinator	e-mail address
BI101	From Cell to Organism	Jim Carolan	James.carolan@mu.ie
BI102	Biological Function and Diversity	Mark Robinson	Mark.robinson@mu.ie
BI103	Human Biology	Kay Ohlendieck	Kay.ohlendieck@mu.ie
BI108	Mechanisms of Human Disease	Marion Butler	Marion.butler@mu.ie

First Year Committee: will meet at least once each term. Also, the Biology department's gender equality steering committee may engage with the student reps in focus groups during the academic year.

The members will be:

- Kevin Kavanagh, Jackie Nugent, Jim Carolan, Mark Robinson
- 1 postgraduate demonstrator
- 1 technician
- 6 elected first year student academic reps (MSU to hold elections)
  - 2 Science
  - 1 Biotechnology
  - 2 Biological Sciences
  - 1 Science Education
  - 1 Pharmaceutical & Biomedical Science

Problems and matters of interest will be discussed.
If you have issues which you would like to be considered you should tell your representative.

DEPARTMENT OF BIOLOGY STAFF RESEARCH INTERESTS

Name & Qualifications	Key Words	Research Interests
Dr O. Bayram, MSc PhD	Secondary metabolism, Mycotoxins, Fungal development, Cell signaling, Epigenetics, Gene expression, Protein-protein interactions	https://www.maynoothuniversity.ie/biology/our-people/ozgur-bayram#2
Dr M.P. Butler BSc PhD	Cancer, Neurodegenerative Diseases, Toll-like Receptor Signalling	https://www.maynoothuniversity.ie/biology/our-people/marion-butler#2
Dr J.C. Carolan B.A (Mod) PhD	Proteomics, Mass Spectrometry, Genomics, Molecular Biology, Bumblebee Ecology, Biodiversity, Plant-Insect Interactions, Crop Pests	https://www.maynoothuniversity.ie/biology/our-people/james-carolan#2
Dr J. Devaney BSc PhD	Ecology, Forest Ecology, Climate Change, Biodiversity-Ecosystem Function, Invasive species	https://www.maynoothuniversity.ie/biology/our-people/john-devaney#2
DrP. Dowling BSc PhD	Oncoproteomics, Biomarkers, Detection, Biofluids, Mass Spectrometry	https://www.maynoothuniversity.ie/biology/our-people/paul-dowling#3
Professor S. Doyle BSc PhD	Disease diagnosis, *Aspergillus fumigatus,* proteomics, nonribosomal peptide synthesis, oxidative stress, immunoassays and enzymology.	https://www.maynoothuniversity.ie/biology/our-people/sean-doyle#2
Dr K. English MSc PhD	Cellular therapy, mesenchymal stem cells, immune modulation, pre-clinical models of inflammatory disease, organ transplantation	https://www.maynoothuniversity.ie/biology/our-people/karen-english#2
Dr D.A. Fitzpatrick BSc PhD	Computational Biology, Bioinformatics, Genome Evolution, Phylogenomics, *G*enomics, Transcriptomics, Proteomics, Fungi, Metabolic pathways, Genome sequencing, oomycetes.	https://www.maynoothuniversity.ie/biology/our-people/david-fitzpatrick#2
Dr E. Graciet MSc PhD	Protein degradation, ubiquitin system, biochemistry, plant molecular biology, plant development, plant-pathogen interactions	https://www.maynoothuniversity.ie/biology/our-people/emmanuelle-graciet#2
Professor C.T. Griffin BSc PhD	Behaviour, symbiosis, physiology and biogeography of invertebrates (insects and their nematode parasites); nematode pheromones	https://www.maynoothuniversity.ie/biology/our-people/christine-griffin#3
Dr A. Hogan BSc PhD	Immunology, obesity, metabolism, immunometabolism	https://www.maynoothuniversity.ie/biology/our-people/andrew-hogan#2

Name & Qualifications	Key Words	Research Interests
Professor K.A. Kavanagh BSc PhD	*Aspergillus, Candida,* Fungi, Innate immunology, Insect, Medical mycology, metal-cell interactions, Proteomics	https://www.maynoothuniversity.ie/biology/our-people/kevin-kavanagh#3
Dr L. Lopez BA PhD	Genomics, Neurodevelopmental Disorders	https://www.maynoothuniversity.ie/biology/our-people/lorna-lopez#2
Dr A.M. Maher (Contract)	Entomopathogenic nematode, microbes, symbiosis, biodiversity	https://www.maynoothuniversity.ie/biology/our-people/abigail-maher#2
Professor B.P. Mahon BSc PhD	Cell Biology, Immunology, mesenchymal stem cells, immune modulation	https://www.maynoothuniversity.ie/biology/our-people/bernard-mahon#2
Dr J. Masterson BSc PhD	Allergy, Inflammation, Epithelial Cell Biology, Remodeling, Mucosal Barrier	https://www.maynoothuniversity.ie/biology/our-people/joanne-masterson#2
Dr E. McNamee BSc MSc PhD	Autoimmunity, Mucosal Immunology, Translational Immunology, Chemokines, microRNAs	https://www.maynoothuniversity.ie/biology/our-people/eoin-mcnamee#2
Dr C. Meade BSc PhD	Ecology, Arctic and Alpine Plant Ecology, Molecular Ecology, population genetics and systematics of plants	https://www.maynoothuniversity.ie/biology/our-people/conor-meade#1
Dr S. Miggin MSc PhD	Innate immunity, toll-like receptors, inflammation, Type-2-Diabetes, Osteoarthritis	https://www.maynoothuniversity.ie/biology/our-people/sinead-miggin#2
Professor P. Moynagh BA(mod) PhD	Molecular Immunology, Inflammation, Inflammatory Diseases, Signal Transduction,	https://www.maynoothuniversity.ie/biology/our-people/paul-moynagh#3
Dr J.M. Nugent MSc PhD	Plant molecular, developmental biology	https://www.maynoothuniversity.ie/biology/our-people/jackie-nugent#3
Professor K. Ohlendieck DipBiol PhD DSc	Skeletal muscle biology, proteomics, biomarker discovery	https://www.maynoothuniversity.ie/biology/our-people/kay-ohlendieck#3
Dr S. O'Dea BSc PhD	Epithelial immunology, lung disease	https://www.maynoothuniversity.ie/biology/our-people/shirley-odea#3
Dr R. Owens BSc PhD	Pathogenic fungi, secondary metabolites, proteomics, comparative metabolomics	https://www.maynoothuniversity.ie/biology/our-people/rebecca-owens#3
Dr M. Robinson BBioMedSc PhD	NAFLD, ALD, NK cells, liver cirrhosis, tissue-resident immune cells, immunosenescence	https://www.maynoothuniversity.ie/biology/our-people/mark-robinson#2

Name & Qualifications	Key Words	Research Interests
Dr M. Schroeder BSc PhD	Pattern recognition receptor signaling, Host-pathogen interactions, type I interferons, breast cancer, drug development	https://www.maynoothuniversity.ie/biology/our-people/martina-schroeder#2
Dr F. Walsh BSc PhD	Antibiotic resistance, microbiomes, infectious diseases, bacteriology, metagenomics	https://www.maynoothuniversity.ie/biology/our-people/fiona-walsh#2

COURSES

Personal Laptops: The delivery of all first-year modules this year will follow a blended approach that combine online and in person components. It is very important that you are able to access the online material (live streamed lectures, online assessments, recordings of lectures etc). It is expected that all students will have access to a laptop and on occasion you will be required to have your own laptop for practical assignments and quizzes.

For information on a number of schemes to provide you with a laptop or financial assistance towards the purchase of one please contact the Maynooth University Access Office access.office@mu.ie

Studying Biology for the first time: It is not necessary to have studied Biology previously, as the approach taken in the Department of Biology is different from that used at school. If difficulties arise because of unfamiliarity with technical language, then one of the following should be consulted:

- Lawrence, E. (Ed) (2016). *Henderson's Dictionary of Biology** (16th Edition), Pearson Education Ltd.
- Thain, M. *et.al.* (2005). *Dictionary of Biology** (11th Edition). Penguin Books Ltd., London.

**Available in the College Bookshop*

Please note that the digital resources that are used in BI101 and BI102 are designed to build your levels of understanding and knowledge from an introductory level up.

Course structure: First year biology modules typically comprises **3 lectures,** and either **one three-hour practical session** or one **workshop** every second week. Due to Covid-19 restrictions the majority of lectures will be recorded in advance and the scheduled lecture times will be used for group meetings.

Your timetable for the year, location of lectures and practicals is available at webpage: https://www.maynoothuniversity.ie/biology/timetable-0

A brief outline of the courses is given on pages 13-14, however, for a full description including Learning Outcomes please check the course descriptions on the Maynooth University webpage: http://www.maynoothuniversity.ie/courses/ and search for your module under "prospective students"

Engagement: In order to complete first year biology successfully it is **essential** to work hard, attend or stream all classes (lectures, practicals and tutorials) and complete all continual assessment conscientiously.

Lectures provide the framework for the course and exams will be based on them. This year most lecturers will be prerecorded and narrated by your lecturer and in most cases, you will be provided with lecture handouts (versions of the slides used by your lecturer).

It is necessary to read through your lecture as soon as possible after each lecture. If there is anything you do not understand please consult a textbook or ask your lecturer. Supplement your notes with extra information obtained by consulting books. Lecturers, who will be setting and

marking the exams, are more impressed with an answer with evidence of extra reading than one which only restates the lecture notes.

Some modules (BI101 and BI102) adopt digital systems to provide additional learning tools and resources. Engaging with these systems is an integral component of how we teach Biology and supplement your learning beyond the standard lecture.

Books: There is a wide range of biology books available in the library, many of which provide excellent background material for the course.

The core course textbook in first year is **Brooker, R.J, *et al* (2019) Biology (5th edition)** McGraw-Hill Publishing and all Biology students will purchase a licence to access the digital eTextBook version of this text. The licence is included in your registration fee. (See '**LABORATORY PRACTICAL ARRANGEMENTS** ' section later P22.) Hard copies of this textbook can be purchased (separately) through the University Bookshop. Previous editions and secondhand copies will have the majority of the material in the 5th edition.

Campbell's Biology (11th Edition) (ISBN-13: 978-0134093413) by Pearson is also a good reference book if you find a secondhand version. Please note that the images and text used by your lecturers may not align to those in this textbook.

On occasion handouts are provided to supplement the lecture material.

BI101 FROM CELL TO ORGANISM. Topics covered include: structure of large biological molecules; basic animal and plant cell structure; cellular organelles; cytoskeleton; extracellular matrix; viral structure and function; bacterial cell structure, sporulation, growth and control of bacteria; fungal cell structure, role of yeast in brewing, fungal diseases; principles of genetics; mitosis and meiosis; patterns of inheritance; transcription and translation; mechanisms of evolution; microscopy; lab safety

Course topics consist of:

- Cell Biology
- Microbiology
- Biochemistry
- Molecular Biology
- Genetics
- Evolution

(Course given by: J. Carolan/K. Kavanagh/L. Lopez/D. Fitzpatrick)

BI102 BIOLOGICAL FUNCTION AND DIVERSITY. Major topics covered include: (i) introduction to animal evolution, anatomy and physiology; (ii) introduction to plant diversity, anatomy and physiology and (iii) introduction to ecology. The animal section focuses on the origin, characteristics and range of vertebrates, the range of adaptations present in vertebrates, the evolution of mammals, primates and humans and gives an introduction to the physiological functions necessary for life. The second part of the course focuses on plants and introduces plant diversity with an emphasis on the diversity and anatomy of flowering plants. Also discussed are plant responses to internal and external stimuli, including plant hormones. Transport of water and nutrients in plants is also discussed. The ecology section reviews succession and climaxes, mineral cycles and energy in ecosystems. This course covers the following topics:

- Vertebrate Structure & Function
- Animal Physiology
- Plant Anatomy & Diversity
- Plant Physiology
- Ecology

(Course given by: M.Robinson/P. Nolan/S.Miggin/J. Nugent/G.Maher/C. Meade)

NOTE: For further information on number of practicals, content and learning outcomes for each module please refer to the course page at http://www.maynoothuniversity.ie/courses/

BI103 Human Biology: Human biochemistry, chemistry of the main bio-molecules. Evolutionary origins of humans, bipedalism, intelligence, hominid family tree, cultural evolution. Evolution of the human immune system, impact of environmental pressures on immune gene expression with implications for infection, vaccination and disease. The molecular basis of human genetic diseases covering single gene disorders, X-linked disorders, complex diseases, chromosomal imbalances and rearrangements and mitochondrial mutations. A brief outline on the cloning and identification of disease genes, genetic testing, gene therapy and ethics surrounding medical genetics. Human infectious disease, transmission of disease, diagnosis and treatment.
(Course given by K.Kavanagh, F.Walsh, K.Ohlendieck, L. Lopez, E.McNamee).

BI108 Mechanisms of Human Disease: Topics covered include: basic concepts of immunology including innate and adaptive immune responses, immunodeficiency disorders, regulation of the cell cycle, cancer, basic molecular and cellular concepts of the nervous system, select neurological disorders, basic molecular and cellular concepts of chronic metabolic disorders, cardiovascular and respiratory disease, the role of the microbiome in disease. Students carry out library-based research and give a short oral presentation on a biological topic. In addition, students work in groups to research and present a poster on a biological topic. The posters are presented for public display and are assessed on content and presentation. (Course given by M.Butler, K.Ohlendieck, K Kavanagh, and A.Hogan)

Skill enhancement courses

Literature project (BI103): In the first semester you will be given a topic to research and prepare a dissertation (or essay) upon. You may discuss the topic with the relevant staff member and fine-tune the title. The dissertation should be 2000 words in length and be submitted through Moodle BI103 before **1pm** on **Friday 17 December 2021**. The work should be your own and should be uploaded onto Turnitin self-check (ONLY through Moodle BI103) before submission, and checked for originality. A tutorial on how to do this will be posted on the BI103 Moodle page**.** You must insert a cover sheet as the first page of your final essay submission, the cover sheet is available to download from Moodle BI103. Your essay will be examined and returned to you in Semester 2, with a mark which will count towards the BI103 mark.

Oral Presentation BI108: You will be required to give a short 5-10 minute oral presentation on the topic to staff members and your fellow students **towards the end of the second semester.**

Group projects: The class will be sub-divided into groups of 4 and each group will be given a Biological topic to research. You will be required to present a poster detailing your findings and be prepared to discuss the work with members of the Department when you display your poster. You should ensure you use the library and information sources on the WEB to find out about your specific topic. Marks will be awarded for the poster, which will count towards your **BI108 mark.**

Tutorials: You are required to attend a series of tutorial presented by members of the Department. These will cover a wide range of topics and will enhance your knowledge of Biological Science. In many cases you will be given written material to read before the tutorial so you should be prepared to ask question and discuss the topic of the tutorial.

LECTURE DELIVERY 2021/22

BI103 & BI108 Students – Lectures will take place on campus in the allocated lecture halls (consult timetable for venues).

BI101 & BI102 Students – Lectures will take place online.

Due to current COVID-19 guidelines our assigned lectures for BI101 have been moved online for at least the first weeks of Semester I. You will however come to the MU campus for your BI101 Biology Practicals that commence in Week 2. If health guidelines change, you will receive an updated schedule that may involve additional on campus time.

Please review your Moodle pages for each module daily to keep informed of any updates/changes.

All **BI101** students have been assigned into one of two groups. These groups will attend online meetings which will be held online during the scheduled lecture times. Please be available on the **Microsoft Teams** group for **BI101[A]—From Cell to Organism (2021-22:Semester 1)** at the times scheduled below.

BI101 Scheduled Activities for Weeks 1-2 of Semester I with Dr Jim Carolan

Group	Scheduled Times	Contents	Preassigned Groups
Meeting Group A	Monday 27th Sept 2pm BI101 Teams	*Introduction to BI101*	All Programmes **except** MH201 & MH203
Meeting Group B	Tuesday 28th Sept 4pm BI101 Teams	*Introduction to BI101*	MH201 & MH203 students **only**
Groups A+B	Wednesday 29th Sept 9am BI101 Teams		All Students

The main objectives of the online BI101 meetings are to provide you with face to face contact time with your lecturers. The meetings may involve tutorials, Q&A sessions, key concept reviews and discussions on activities and assignments. Most importantly it provides you with an opportunity to clarify any issues you may be having with the BI101 module in general. The content covered in these meetings will be the same on both days and there will be room to move days if you have a scheduling clash (with an on campus activity later that day for example).

Two main forms (modes) of lecturing will be adopted this year.

1. **Asynchronous Lectures**- In this mode your lecturer will post narrated videos of their lecture material online for you to review and study. Most lecturers will provide these as an mp4 video file, Power Point Show or Panopto recording. These will be posted to the Moodle Page for each module. A set of accompanying lecture handouts (generally the presentation slides) will be provided in pdf format.
   The Majority of BI101 and BI102 Lectures will be in this mode.

2. **Synchronous Lectures-**In this mode your lecturer will deliver their lecture during the scheduled lecture time. This lecture will be delivered live through Panopto for students to access remotely from home. Recordings of the live lecture may be also posted to Moodle for later review. A set of accompanying Lecture Handouts (generally the presentation slides) will be provided in pdf format.

Recorded Introductory Videos

A number of Introductory videos will be posted to the BI101 Moodle Page to help you prepare for the first week of Semester I. These videos will outline how the course will be structured in addition to providing guidelines on your online, virtual learning environment and inform you of your designated BI101 laboratory groups.

The videos that will be posted include:

1. Welcome to BI101
2. The Connect System
3. Practical Safety Induction Video
4. BI101 Laboratory Practical 1-Prepartory Video (Microscopy)

EXAMINATIONS & CONTINUAL ASSESSMENT

1st Year Biology Prize:
Peter Whittaker Prize for best performance in 1st year Biology: Cash prize + Certificate

BI101 and BI102 Continuous assessment (CA) and module examination

This year BI101/BI102 will be 50% Continuous Assessment (CA)/50% Theory Exam

Provisional CA breakdown*:

- Practical Write-ups/Reports = 15%
- McGrawHill Connect LearnSmart Assignments = 5%
- Writing assignment** (e.g. Module related topics) = 18%
- Learning Outcome Assessments (Biweekly quizzes) = 12%

**May be subject to change*
*** Additional instruction and information to be provided at a later date.*

BI101/BI102 Theory Exams:

- Exams will be in the form of an MCQ in January.
- Current plans are for exams to proceed on campus and in person.
- If in person exams cannot proceed exams will be held remotely.

Pass standards

Pass standard	40% or higher
Compensation range	Marks of at least 35%, but less than 40%
Incomplete/Not passed grades	Marks below 35%

Please see the following link (under Policies & Regulations) for Marks and Standards for programmes at Maynooth University:
https://www.maynoothuniversity.ie/exams/university-examinations-regulations-and-procedures

Past examination papers can be obtained from the Quicklinks section (lower left-hand side of the page) of the Maynooth Library web page. https://www.maynoothuniversity.ie/library These may be used as a **guide** to the **type of questions** which might be submitted.

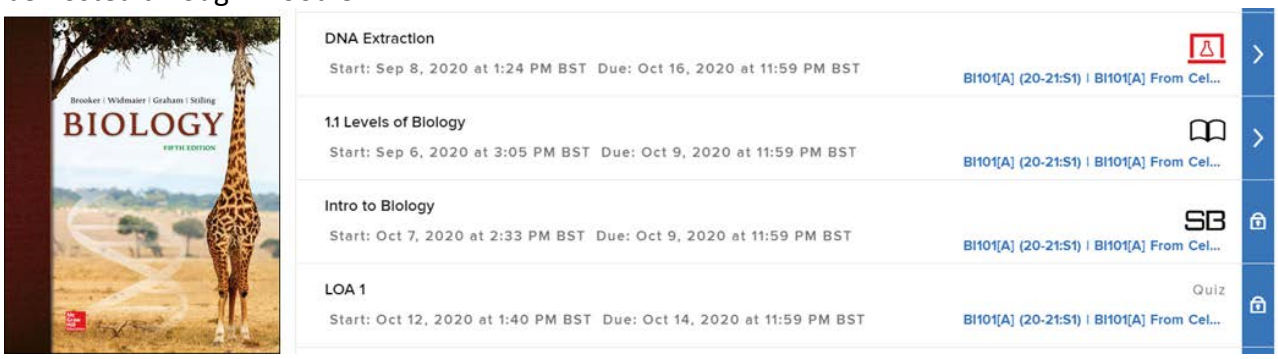
(BI103, BI108) Biological & Biomedical Science students only

You are required to sit two papers in Biological Science, one in January (Module BI103) and one in the Summer (Module BI108), which will cover the ADVANCED courses. These courses include a literature project and group work as listed on page 12.
Theory – 60%
Continual Assessment – 40%

McGraw Hill Connect System:

The Department utilises the McGraw Hill online teaching platforms Connect and LearnSmart as part of the core biology modules **BI101 and BI102**. You will be provided with a licence to the Connect system and a digital e-Textbook version of McGraw Hill's Brooker's Biology 5th Edition.

Connect is a digital learning system that will be used to support teaching and learning and through this system you will have access to question banks, animations, exercises, adaptive learning resources in addition to an **e-text version of Brooker's Biology (5th edition)**. Access to Connect will be hosted through Moodle.



This Connect system will also be used to host **LearnSmart Assignments** (a reading assignment followed by a set of questions that are chosen based on the level of you understanding of the material). Each LearnSmart Assignment will be related to your lecture and practical content for a given week. Completing these assignments will contribute to your overall continual assessment for this module. Quizzes (see below) that are assigned later in the module may not be taken until these LearnSmart Assignments have been successfully completed.

The Connect System will also be used for other types of assignments including quizzes (to help you improve your learning) or to assess your learning. **Learning Outcome Assessments** (LOAs: a quiz based on material covering the previous week's lectures and practicals) will contribute to your overall grade for this module.

More information on the Connect System will be provided to you on Moodle, in the instructional videos and during your first scheduled lecture sessions.

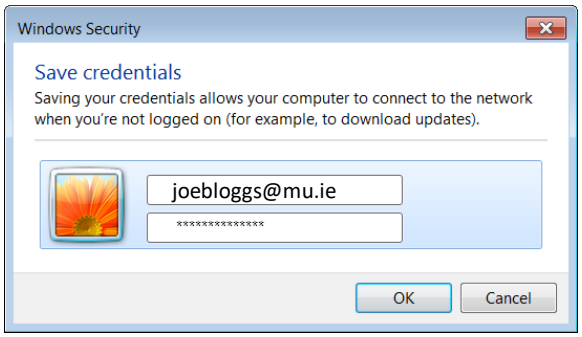
Registering for Connect (First Time Users)

In order to access the connect system you will need to register on their system through your Maynooth University Moodle system. Instructions will be posted to Moodle and please follow the steps for registering to the Connect system carefully.

Students that wish to obtain a hard copy of this Brooker textbook can purchase it (separately) through the University Bookshop.

Connecting to Maynooth University wireless networks:

Maynooth University along with many other institutions broadcasts the eduroam wireless signal for students and staff. Use your wireless client to connect to eduroam and when prompted enter your Maynooth username and password.



You may need to enter your credentials twice when connecting for the first time. Some users will see prompts regarding certificates and should choose the "Accept \ Continue" option at this prompt.

***If you enter your username in the format of **username@mu.ie** (not an email address) your Maynooth account will allow you to connect to eduroam in other participating institutions for example in UCD, DCU, TCD and many others around the world.*

Notices: Information for students will be posted on MOODLE and can also be notified by e-mail to your mumail address. These will include information on courses, questionnaire results etc.

E-mail: You should check your Maynooth University e-mail account on a DAILY basis. Messages to individual students from Staff will normally be made via e-mail, using the student's Maynooth University e-mail address. Delete messages regularly to ensure that your e-mail account is not over quota.

Moodle https://2021.moodle.maynoothuniversity.ie/**:** This online learning environment is accessible both on and off campus. We use it for: (a) posting notices and announcements (b) to pass on information/ resources about individual modules and (c) recording absence. You will have access to all MOODLE areas relating to the modules for which you are registered as well as to general information areas entitled

- BI ALLBIOL-All Biology Students 2022

and

- BI ABSENCES1STYEAR: Biology 1st Year Absence Form
  a page for recording absence and submitting supporting documentation. You should become familiar with the essentials of MOODLE as soon as possible.

Biology Department - Communication guidelines for students

This document is designed to clarify:
- how your lecturers and module coordinators will communicate with the class
- how your lecturers and module coordinators will communicate with individual students
- how students can best communicate with lecturing staff and with each other

1. General guidelines
- you should indicate your name and student number in any e-mail you send to a lecturer.
- you should always check that your question(s) has/have not already been answered in documents posted on Moodle and Teams, or in a previous e-mail or module announcement.
- regarding general questions on module content, you should seek to find module information on Course Finder first.
- unless it is an emergency, you should seek to contact your lecturers and module coordinators during normal working hours and days.
- members of staff will do their best to answer new queries within 48 hours (during working days). Please allow at least 48 hours for a reply to your e-mail before contacting the same person or a different staff member in relation to the same query. If your query has already been answered in a previous e-mail or post, it may take longer to reply to your e-mail.

2. Class announcements by lecturers and module coordinators
Class announcements can be done using three platforms:
- e-mails to the class. We will always use your MU e-mail address.
- and/or Lecturers announcements on a specific module's Moodle page
- and/or using the chat function in a specific module page on Teams

Class announcements can be used by your lecturers to send reminders, but also to answer queries received by e-mail from individual students, if the query is relevant to the whole class. In this case, you may not receive an individual reply to your original e-mail.

It is your responsibility to check e-mails regularly, Moodle and Teams as well. Each of these platforms have the option of sending notifications. We encourage you to turn on these automatic notifications.

A lecturer or module coordinator may not prioritize replying to your e-mail if the answer is already available to the class.

3. Lecturing staff communication with individual students
If a query received by e-mail does not regard the whole class, lecturing staff will do their best to answer to the student individually in a timely manner (e.g. within a couple of days). While we are happy to help you study and ensure that we provide an environment that promotes learning, some queries are not acceptable and cannot be answered.

<u>What queries are NOT acceptable?</u>
- asking for answers or corrections to previous exam questions. This query is not acceptable, because it is your work that is assessed and so your submissions need to reflect your own writing, ideas and thoughts.
- asking for details of calculation, answers or corrections for lab-write ups before these are handed in. This query is not acceptable, because it is your work that needs to be assessed. Practical-related

questions should be asked to demonstrators or lecturers during the lab sessions (in teaching labs or on Teams).
- demonstrators should not be asked to provide details of calculations or to pre-correct your lab write ups at any time. All questions to demonstrators should be asked during the during the lab sessions (online or in teaching labs).
- asking for slides or lecture notes of a module that you are not registered for.

4. Communication among students in a class
Students in a class can use multiple 'official' platforms to communicate among themselves. We encourage these because they foster group work and mutual help. Posts and communications on different platforms (Moodle, Teams, e-mails) should be linked to the course/module, courteous and respectful. Note that these platforms are accessible to the whole class, including lecturers.

Platforms available:
- Class discussion forum on a specific module's page on Moodle
- Teams chat on a specific module's Teams group

LABORATORY PRACTICAL ARRANGEMENTS

Location: Teaching Lab 1, Callan Building, North Campus

1ST in Person Laboratory Sessions: 7-8th October 2021

A payment of €45 is required from you as a contribution towards the cost of the McGrawHill Connect System, digital e-Textbook of Brooker's Biology, practical manuals and any handouts that you will receive throughout the year.

Please pay online through "Biology Shop" any time before the 7th/8th October with a credit or debit card:
https://shop.maynoothuniversity.ie/index.php?app=ecom&ns=catshow&ref=Biology

Laboratory Sessions:

All Biology practicals will take place in person. These "wet laboratory" practicals will focus on core concepts and prioritise the most important aspects of the course which require hands-on experience. For each practical you will complete a workbook or report which will be submitted online to your practical demonstrator for grading.

Please do not select any tutorials or practicals for other subjects until you have been assigned your Biology practical time.

There are three lab sessions: Thursday morning (TA 10am-1pm), Thursday afternoon (TP 2pm-5pm) and Friday morning (FA 10am-2pm). We will assign you to one of these practical sessions and notify you by email/Moodle.

Once notified, you can then choose your other practicals/tutorials that do not clash with your Biology Practical time.

Important Practical Dates

Week	First Practical Time/Date	Programme/ Group*	Activity
1	Thursday 30th Sept 10am-1pm	TBC	Review Practical Introductory & Safety Videos (complete accompanying assignments)
1	Thursday 30th Sept 2-5pm	TBC	Review Practical Introductory & Safety Videos (complete accompanying assignments)
1	Friday 1st Oct 10am-1pm	TBC	Review Practical Introductory & Safety Videos (complete accompanying assignments)
2	Thursday 7th Oct 10am-1pm	TBC	Practical 1- Cell Biology (In Person)
2	Thursday 7th Oct 2-5pm	TBC	Practical 1- Cell Biology (In Person)
2	Friday 8th Oct 10am-1pm	TBC	Practical 1- Cell Biology (In Person)

*You will be notified of your Lab group via Moodle.

NB-Once you are assigned to a lab time you cannot sign up for any activity occurring at the same time (even in weeks where you do not have a scheduled Biology lab). **On weeks where you have no Biology lab you will have scheduled tutorials and other online activities.**

In the week that you are not scheduled for a "wet lab" you will complete an online, virtual lab session. Online sessions will also have access to a scheduled, one-hour, live, question and answer session with one of our experienced staff.

In the event of a lock-down the wet labs may be replaced with video recordings of the lab activities for you to view and base your write-ups on.

Please note that you have been preassigned to these groups in advance. You should make any laboratory/tutorial choices for your other subjects so that they do not clash with your Biology lab.

First BI101 Lab Date 7th/8th October Teaching Lab 1

Thursday Group TA-10am-1pm
TBC

Thursday Group TP-2pm-5pm
TBC

Friday Group FA-10am-1pm
TBC

If you have a GENUINE timetable conflict with a core module, please email biology.department@mu.ie

REQUIREMENTS FOR PRACTICALS

- If you have any issues relating to the practicals please contact Teresa Redmond the First Year senior demonstrator by email teresa.redmond@mu.ie. The senior demonstrator is responsible for the organisation of the practical class and coordinates practical assignments and assessments.

- Undergraduate Biology is a largely practical subject. It is **compulsory** that you attend **all** classes and perform the exercises in the Practical Biology set for each class.

- Practical Classes will begin at exactly 10.05 for morning sessions and 14.05 for afternoon session. Students are expected to be present and prepared with lab coats, safety glasses at this time. For safety reasons usually no admittance will be allowed after these times.

  Failure to attend and engage in the continual assessment component of your modules will result in a technical fail.

- **Laboratory coat** Also available in the Students' Union Londis Shops or the College Bookshop. It protects you and your clothes. Lab Coats must be Howie style i.e. not open necked but with a fastening at or just under the neck. Lab coats must also be cotton or mixed cotton (these are less flammable) and worn fully closed and sleeves down. **You will not be allowed into the lab without a lab coat.**

- **Safety glasses** are required when any chemical or biological agent is used. These may be purchased from the outlets above or in the practical session (at a cost of €1.00). Prescription glasses are not safety glasses – contact your optician if you want to purchase safety glasses with prescription lenses or your demonstrator if you want to purchase alternative safety glasses which fit over prescription glasses.

- **Plain paper** for drawing and a soft binder/folder.

- **Personal Lap Tops** Some weeks you may be required to sit an online exam or practical component. Although the Department has a very limited number of laptops, we request that you bring your own to ensure availability**. You will be notified of these exams in advance.**

- **Pre-practical videos and presentations may be posted prior to a practical which you must review before you attend the lab. These will include an introduction from the lecturer and information necessary for the practical. You may be required to complete an MCQ that covers this pre practical material before you attend the lab. You should also prepare for your practical classes by reading the relevant part of your practical manual and lecture notes.**

- For each lab you will submit a practical workbook or write up online through your module page on Moodle. All assignments will be submitted online through your module page on Moodle. Your writeup will be assessed by the demonstrator allotted to your bench and returned to you the following week. These assessments form a part of your practical mark at the end of the year. You must read your practical workbooks/write-ups feedback so that you can learn from your mistakes.

- Each semester you will be assigned a demonstrator who will provide guidance and instruction during your practical. Demonstrator will also be responsible for grading your practical workbooks/reports.

- It is most important that you arrive on time for practical classes. **Late-comers may be excluded**. The practical itself will start with a short explanatory talk (delivered by the Lecturer) giving information necessary for you to be able to carry out the practical.

Additional Practical Policies:

- Laboratory reports must be submitted for correction on the date instructed. Late submissions will be penalised.

- If a student attends a practical but the write-up is late because of illness, the student should obtain a sick cert and contact the Senior Demonstrator to agree a date for submission. There will be no penalty in this case.

- If a student attends a practical but the write-up is late because of any other unavoidable or unforeseen circumstance, the student should contact their Module Coordinator.

- If a write-up is late for any other reason, the following penalty will apply: 25% deduction if late by one week. After this the write-up will be graded for corrections and instruction but NO mark will be awarded for work.

PLEASE NOTE THAT THE UNIVERSITY PLAGIARISM POLICY APPLIES TO PRACTICAL CLASSES AND ALL ASSOCIATED REPORT WORK.

REGULATIONS CONCERNING PRACTICAL CLASSES

University safety and public health procedures must be adhered to at all times. Instruction from demonstrators, academics and technical staff must be obeyed at all times. Failure to do so will result in automatic expulsion from the laboratory and the forfeit of any grades associated with that practical session and an "unexplained absence" will be awarded. *Repeat offenders will receive an automatic failure of continuous assessment.*

Laboratory safety- COVID-19 Related Issues:
The control measures associated with reducing the risk of COVID-19 transmission may change as the pandemic evolves.

- Do not attend a practical if you have symptoms of COVID-19, or if you have been advised by a medical practitioner or HSE contact tracing staff, to self-isolate or restrict your movement.
- Only attend on your assigned day/time. If this is problematic due to scheduling, please contact the senior demonstrator (Teresa Redmond teresa.redmond@mu.ie) in advance.
- Do not move from your bench space without the permission of your demonstrator.
- All students are required to disinfect their bench work area and lab equipment before and after each lab session. Tissue and alcohol have been provided at each bench.

Face Coverings and Personal Protective Equipment

- In line with University policy, face coverings are mandatory during practicals and in all indoor locations.
- If you are unable to wear a face mask for medical reasons, contact the University Covid Response Team prior to your arrival on campus, on 01 474 7999 or covid.response@mu.ie, who will advise you and your department(s) on the steps required to mitigate risk for you and others. Following this, you must contact your senior demonstrator prior to attending any practical session. Face shields worn in practicals must meet the same standards (EN166 1 F3) as safety glasses, where safety glasses are required. Face shields below this standard must never be worn with or instead of safety glasses.
- **Put your face covering on before entering the building and only remove it after you have left the building.** It is advisable to have an extra face mask.
- Do not put face coverings on laboratory surfaces or equipment.
- Safety glasses are required when listed as a control measure in the risk assessment specific to each practical. These risk assessments are in your practical manual.
- **It is essential** that you bring your laboratory coat and safety glasses to all practicals where they are required for use (specified in the risk assessment for that practical). Under the current restrictions, the department cannot guarantee the availability of spare lab coats or safety glasses, and you will be prohibited from staying in the practical without these, if they are a requirement.
- Launder your laboratory coat regularly (preferably weekly) in a minimum 60^{o}C wash cycle.
- Gloves must be worn when specified by the practical risk assessment. Not all practicals require gloves. Do not wear gloves to mitigate Covid-19 risks, gloves are more likely to increase the risk of transmission and for some practicals gloves are an unacceptable high risk e.g. in Year 1 with bunsens.

Entering/Exiting the Teaching Lab

- Do not congregate in any building or corridor before or after a practical.
- Go straight into your lab wearing your face covering, do not wait in the corridor, do not put your lab coat on in the corridor.

- Go straight to your designated seat. Seats will be designated during your first practical.
- You will be instructed where to store your personal belongings. Do not bring large bags or suitcases to the laboratory as there are no suitable storage locations in the laboratories for these. Use your locker to minimise the items you bring to the laboratory.
- Scan the **QR** code at your workstation using the Maynooth University Check in App.
- You are not permitted to enter the prep lab, please notify your demonstrator if you require assistance.
- When you have finished your practical work, contact your demonstrator to see if you can leave the lab. You will be instructed when to leave the laboratory.
- Remove your lab coat and pack your bag before leaving the lab.
- You may need to use the hand sinks in the bathrooms to avoid congregation around the laboratory hand wash sinks.
- One-way stairwells are signed as well as routes in corridors. The wider corridors are two-way with a 'keep left' policy.
- Additional or revised control measures will be communicated online or during a practical.
- Any breaches of these regulations or University covid mitigation policies will be reported directly to the University Covid Response Team.

Preparing for Practicals

- Complete any advance requirements for the practical before attending (e.g. Read practical manual, watch any associated videos, complete any required exercises). Details of these requirements will be provided by your lecturer in advance.
- Practical manuals will be available on Moodle in advance of your practical with a printed copy provided to you during attendance at the practical.
- If you are unable to attend a practical please refer to the instructions in your introductory handbook for completion of an absence form, along with submission of appropriate supporting documentation, as required (Notification of Absence section). Please note the list of acceptable reasons for non-attendance, outlined in the Notification of Absence text.

The Department of Biology would appreciate if any student with a medical condition/allergy, or who is pregnant/breastfeeding, to document the details on the form which will be provided during your first workshop class. If the medical condition changes during the year, please inform your Senior Demonstrator or your Course Coordinator.

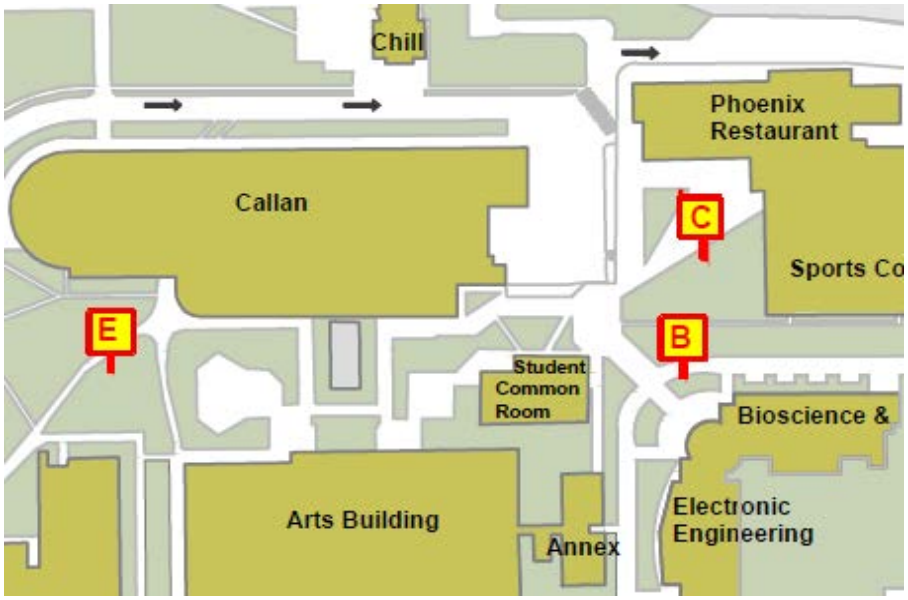
All staff involved in this process will respect the confidentiality of the students, ensuring that this information is provided to the relevant personnel on a need-to-know basis only.

BIOLOGY LABORATORY SAFETY

For the protection of yourself and others please read the following notes carefully and obey the instructions implicitly.

FIRE:

- On hearing the fire alarm or on discovering a fire, stop what you are doing and raise the alarm.
- If you are using a Bunsen, switch it off.
- Shut off the Bunsen gas supply to the lab.
- Leave in an orderly manner and close the door behind you. **Do not use the lift.**
- Make your way to the nearest assembly point B, C or E (see the map below).
- Remain at this location until instructed by security staff to return to the building.



PERSONAL PROTECTION:

- Do not smoke, eat, drink or chew gum in the laboratory. University Policy prohibits storage of food and drink and food in all laboratories.
- You are required to wear a Howie style white laboratory coat with all buttons closed and sleeves fully extended at all times.
- You must also wear safety glasses at all times. Please contact your demonstrator if you need to purchase a pair.
- You will be provided with gloves for your personal protection. Unfortunately, they only protect the wearer and can easily contaminate surfaces. Remove all gloves before leaving the laboratory, even if for a brief period. Remove gloves while using laboratory equipment unless there are specific hazards present. Do not wear gloves when using Bunsen burners unless specifically instructed by the lecturer in charge.
- If you need to transfer samples or equipment to another laboratory, remove one glove and used the ungloved hand to open doors etc.
- Sandals, flip-flops and other open footwear are prohibited when chemical and biological agents are used.
- Long hair must be tied back.
- You must wash your hands immediately at the end of the practical.

PERSONAL INJURY:

- You must cover any cuts or grazes with a plaster. Please inform your demonstrator. There are first aid cabinets in all teaching laboratories.
- Report any accident or injury, however trivial, to a demonstrator.
- We will explain specific hazards or disposal methods, if any. You must follow these instructions carefully.
- Please inform your demonstrator if you have any concerns relating to a pre-existing medical condition, or if chemical/biological agents used in a practical session may affect any pre-existing medical condition.

GENERAL SAFETY:

- In accordance with university regulations, you will be expelled from the practical session if you do not conduct yourself in an orderly manner, or if you deliberately act in an unsafe manner.
- We allow students in the teaching laboratory only during timetabled laboratory sessions. You may not use the laboratory at other times unless you obtain permission from the technician in charge.
- Undergraduate students should not enter the preparation laboratory, research laboratories, growth rooms, storerooms etc. without permission.
- Proper regard to the correct use of equipment is required from all staff and students. Intentional interference with safety signs and safety features of any equipment is a criminal offence.
- We expect you to leave your bench place, including sink, clean and tidy.

You should be aware that we frequently transport chemicals and biological materials around the department. Therefore, it is very important that you walk slowly and carefully in the corridors.

N.B. Follow the instruction of your demonstrator at all times. Please check with your demonstrator if you have any doubts or questions in relation to safety. Notify your demonstrator or senior demonstrator if you have any health issues which you feel may be impacted by any practical.

Notification of Absence

It is the responsibility of all students to be available for class throughout Semester I and Semester II between the hours of 0900-1800 Monday to Friday, in addition to occasional classes outside these hours (eg. field trips, academic visits).

If you are unable to attend Laboratory practicals, workshops or tests for any reason you must advise the Department of Biology by submitting an on-line **Absence Form** through the **Moodle course BI ABSENCES1STYEAR: Biology 1st Year Absence Form** either before your absence or within FIVE working days of the end of the period of absence. When submitting the absence form you will also be able to upload copies of your medical certificates or other relevant supporting documentation. Instructions on how to do this are on the Moodle page. **Failure to do so may result in the absence being counted as unacceptable and you will be given a mark of zero.**

Please note that if you are submitting a medical certificate, **the cert must be issued during the period of illness**. BACKDATED MEDICAL CERTIFICATES WILL NOT BE ACCEPTED FOR ANY REASON.

Failure to attend and engage in the continual assessment component of your modules will result in a technical fail.

No more than **two** absences per semester will be accepted. If you lodge more than two absence certificates in a semester, or if the period of absence extends to three weeks, **you will fail the practical component of the course,** and you may be referred to the Academic Advisory Office, Student Services; or to an appropriate member of staff in the department.

Please read and take note of your responsibilities relating to absence as in submitting a Notification of Absence Form, you agree that you have read and understood them.

It is your responsibility to:

- **Advise the department of any absence. Submit an Absence form** to your department through the **Moodle Absences** course with the relevant supporting documentation either **before** your absence or within **FIVE** working days of the end of the period of absence.
- **Keep in touch** with your department should you be absent for a prolonged period.
- **Make up any work** you have missed due to your absence.
- **Agree a revised deadline** with your department for any missed assessment(s) due to your absence. **Note that alternative arrangements for a missed test will only be made if a medical certificate is supplied.**
- **Recognise that submission of an Absence Form does not automatically mean that the absence is acceptable** and that it is at the discretion of the department as to whether any absence is deemed acceptable or unacceptable. If the absence should be deemed as unacceptable it will be recorded as such and count against the minimum attendance level.
- **Recognise that,** although a specific individual absence may be deemed acceptable, if your overall attendance and submission of work drops below the minimum level prescribed by your department, then **disciplinary procedures will still be followed.**
- **Recognise that notification of absence, whether it is deemed acceptable or unacceptable, does not constitute grounds for appeal** against a course or programme failure or failure to progress to the next stage of study.

1. Notification of Absence Forms

Reason for absence	**Documentation required *(all to be submitted online through Moodle)***
Illness up to and including 5 consecutive term-time days (excluding Saturdays and Sundays)	**Absence form**
Illness for more than 5 consecutive term-time days (excluding Saturdays and Sundays)	**Absence form** **plus** formal Medical Certification issued and dated during the period of illness and signed by the Medical Centre, your GP or hospital consultant
Unrelated to sickness	**Absence form** plus supporting evidence

2. Supporting evidence

The following table gives examples of the kind of supporting evidence that you may be required to provide as justification of absence.

Absence	**Evidence**
Illness of LESS THAN FIVE consecutive term time days	Self-certification – **Absence form** which must be submitted to the department through Moodle **within 5 working days of the end of the period of absence**. Should students submit repeated self-certifications, the department will require students to produce formal Medical Certification. **Note that alternative arrangements for a missed test will normally only be made if a medical certificate is supplied.**
Illness of MORE THAN FIVE consecutive term time days	Formal Medical Certification issued and dated during the period of illness and signed by the Health Centre or your GP or hospital consultant
Self-isolation without illness	Self-certification – **Absence form** which must be submitted to the department through Moodle. **Notify in advance or within 1 day of scheduled continuous assessment component**. An alternative assignment/assessment may be made available for you to do remotely and submit online. Supporting evidence can include messages relating to close contacts or instructions to self-isolate.
Outpatient's appointment	Letter from outpatients or appointment card
Doctor or dental appointment	Appointment card
Documented personal problems	Letter from someone, e.g. counsellor, who has direct knowledge of the problem and/or is involved in supporting you
Illness of dependent or family member	Medical Certification and statement explaining illness and why personal attention is necessary
Bereavement	Formal certificate or note from family member who can vouch for the situation
Severe transport problem	A copy of online or newspaper reports on the problem to be submitted to the department **within 5 working days of the problem having occurred**
Court attendance	Official correspondence from the Court confirming attendance requirement
Victim of crime	Statement of events, police report and crime reference number
Involvement in a significant/prestigious event	Letter of invitation from the relevant organising body
Sport commitment at national/county level	Official correspondence from the relevant sporting body confirming the requirement to be available on specified dates

The following table gives examples of the kind of circumstances where absence **may** be deemed as 'acceptable' and 'unacceptable' for non- attendance. This is for general guidance; it does not represent an exhaustive list. All absences will be reviewed on a case by case basis.

Acceptable	Unacceptable
• Illness • Displaying COVID-19-related symptoms • Self-isolating due to COVID-19 • Hospitalisation • Outpatients appointment (where possible you should try to make any appointment outside of your class commitments • Doctor or dental appointment (you should try to make any appointments outside of your class commitments) • Documented personal problems • Illness of dependent or family member (until other arrangements can be made) • Bereavement • Severe transport problems (e.g. severe disruption of train travel due to signaling failure or track problems or major traffic incident on motorways, which can be verified by online or newspaper reports) • Court attendance or victim of crime • Representing College/county/ country at significant or prestigious event or sport commitment or involvement in such an event	• Oversleeping • Misreading the timetable • Paid employment and voluntary work • IT and/or computer problems • Minor transport problems, e.g. being stuck in normal rush hour traffic, not permitting enough time in travel plans for minor unanticipated delays, missed public transport • Holidays • Family celebrations • Weddings • Accommodation issues, e.g. moving house • Extra-curricular sports activities • Driving test • Lack of awareness of attendance requirements and College Regulations in this regard

Multiple Choice Questionnaires and Notification of Absence

Please note that the information given below may change in response to updates in Covid-19 guidelines.

Throughout the year you will sit a number of Questionnaires, the majority of which are Multiple Choice Questionnaires (MCQs) which are generally comprised of questions that cover a significant proportion of the module. MCQs for BI103 and BI108 (Biological & Biomedical Science students only) may be either machine readable MCQs or short answer questionnaires, and may be held during a lecture time slot. It is important that you view the MCQs as official exams and are aware that different policies exist for missing an MCQ than for a practical. In addition, Maynooth University Exam policies and regulations will apply and be enforced during MCQs.

All MCQs are compulsory and failure to sit these exams will result in a **zero** grade.
If you foresee that you may not be able to sit an MCQ it is imperative that you contact the lecturer who is setting the exam or the Senior Demonstrator **BEFORE** the MCQ.

Individuals who miss an MCQ may be permitted a resit if they have an acceptable reason (see page 28) and provide the appropriate evidence. Individuals who miss an MCQ without an acceptable reason and who did not contact the **lecturer who has set the exam** or **senior demonstrator** prior to the MCQ will not be offered a resit and will consequently be awarded a zero grade.

Learning Outcome Assessments

Learning Outcome Assessments (LOAs) are short quizzes that test your learning from the previous week's lectures, practicals and activities. These are used in Modules BI101 and BI102 and may be held on-campus (in a practical class or tutorial slot) or remotely (online) at a predetermined time.

MCQs and LOAs are exams and Maynooth University Exam policies and regulations apply during both. These can be viewed at the Maynooth University Examinations Office webpage.

PREPARATION FOR EXAMINATIONS

- **Preparation for examinations should begin from the first day of the first term.** Steady work throughout the semester is more likely to bring success than cramming for a few weeks before the exams.

- Make absolutely sure that you have a good set of lecture notes, as the lectures provide the framework for the course and exams will be based on them. You **must understand all the lecture material.** If you understand everything as you go along you will find it much easier to learn it during revision.

- Make use of the library or the books recommended by the lecturer to fill out the lecture material and make supplementary notes. Lecturers, who will also be setting and marking the exams, are usually more impressed by an answer with evidence of extra reading than one which merely restates the lecture notes.

- Begin your final revision for examinations in good time. If you leave it too late you will set yourself an impossible workload, leading to panic or undesirable practices, such as question spotting or omitting sections of the course.

- Make sure that you go into the examinations **having learned the whole course.** It is the only way to be sure of being able to answer any of the questions set. If you wish to "spot" questions do so only after you have got a good grasp of the course as a whole, then it may be worth giving **extra** attention to the areas that you guess may come up in the examination.

  You might find it helpful to practice answering previous exam questions under examination conditions (without texts or notes and in the time allowed in an exam). Lecturers are generally willing to correct and criticise these for you.

- Make sure that you have everything that you might need in the examination well before. If your exam is a written exam you will require pens, pencils, rubber, ruler and perhaps some coloured pens or pencils. If your exam is a timed online exam you will need access to your own computer or laptop.

<u>In the examination (only relevant to BI103 and BI108 students)</u>:

- Read the paper carefully - including the rubric (instructions above the list of questions). Make a preliminary decision as to which questions you are going to answer.

- Start with a question you feel confident about. Think carefully about what the question is asking for and answer **the question as set** - not one that you think should have come up. You might find it helpful to begin by making **short** notes on your answer. Also, if you think of something, whilst you are writing your answer, that you want to include later, keep a note of it so that you don't forget. Complete your answers making sure that you follow instructions.

- **ANSWER THE CORRECT NUMBER OF QUESTIONS. This cannot be too strongly emphasised.**

  If you answer **less** than the correct number you greatly reduce your chances of passing or doing well.
- Remember that the answering time allotted for each question in Section B is approximately 30 minutes for first year questions. In general, you should expect your answers to reflect this amount of writing time.

- It is often helpful to illustrate your answers. Diagrams can give a clearer and much more economical presentation of some points. Where you are asked to give an illustrated account, drawings are essential.

- It is important that you
  Record exactly the questions you have answered on the front of your examination paper, as well as at the start of each question.

EXPERIENTIAL LEARNING AT MAYNOOTH

Experience More During Your Time at MU

The routes available to Maynooth students to experience more from their degree programme are diverse, enabling the development of rich learning experiences that connect classroom content with real-world experience. The Experiential Learning Office connects Maynooth students to a range of opportunities in the following areas.

Professional Development and Employability

Experiential learning professional development and employability modules are available to eligible second year students. The key purpose of these modules, involving a number of employers, is to facilitate students in their academic, personal and professional career development, so that they will be well equipped to secure internships and to successfully enter the graduate labour market.

See Skills for Success EX201 and EX202 for more details

MU SPUR (Summer Programme for Undergraduate Research)

An active research based and paid experiential learning programme for successful undergraduate pre-final year student applicants who **wish to learn more about the postgraduate experience, by** working closely with faculty mentors on research projects across a range of disciplines.

Community Based Service Learning

Community Based Service Learning presents a credit-bearing academic experience that empowers students to engage with their surrounding communities, which often results in enhancing student's academic, civic, social and personal development, whilst they contribute to the common good. The experiential learning office facilitates academic staff in offering community-based service-learning experiences with their students.

For further information, refer to:

Website: https://www.maynoothuniversity.ie/experiential-learning-office
Email: Explearning@mu.ie
Tel: + 353 1 4747760

How to fail First Year in University

Life at University is exciting and challenging! You will meet new people and have lots of free time to study and develop new interests. At University you will be treated as an adult so the onus is on you to use your time wisely and get the balance right between enjoying yourself and studying for, and getting, the best qualification you can. It would be very unwise to have a great time socialising in first year and fail your exams in the summer. So you need to be responsible and exercise good judgement in treating your studies seriously. Here are some ways that people in the past have failed first year - learn from their mistakes!!

1. **Do not attend lectures!** If you do not attend lectures you will miss a lot of information that is not possible to pick-up from somebody else's notes. The lecturer may emphasise a point or explain something in a particular way that will stick in your mind. Missing lectures, for whatever reason, is serious and should be avoided. If you do not attend lectures you will undermine the whole learning process.

2. **Chat during lectures!** Some students treat lectures as a great opportunity to have a bit of 'craic', or chat up another student! **But** the main reason for attending a lecture is to get information and develop your knowledge of the topic. Listen to what is being said, write your notes and if you have any difficulties ask the lecturer at the end of the class.

3. **Do not read your notes!** Some students attend classes but never read their notes until just before the exams. If you read your notes the day you attend the lecture it will reinforce the information and help you remember.

4. **Don't study!** Once you have your lecture notes you will need to supplement the information with material from textbooks or the WEB. You will also need to understand the material and begin to learn relevant points. It is far too late to try to do this in the few weeks before the exams - the earlier you do this the easier it will be.

5. **Don't study regularly!** You should get into the habit of trying to do a few hours of study each day from the beginning of the year. You will obviously increase the amount of study you do as the exams approach but it is important to develop a good study routine.

6. **Don't submit material on time!** You will be required to prepare and submit material throughout the year. If you are late you risk losing marks. In addition, it is good practice to be punctual with assignments and manage your time effectively.

7. **Don't attend practicals!** Practicals give you information which supplements the knowledge you get in lectures so it is important to attend these and ask questions if you are unclear on any points.

8. **Don't ask questions!** The aim of University is to increase your knowledge therefore if you are unclear on any point ask the lecturer concerned. They will be delighted to see that you are interested and will be able to answer the query or at least point you in the right direction.

9. **Don't prepare for the exams!** In September the exams look to be vary far away but they will arrive sooner than you expect! You need to start working towards the exams from the first week of the year. Use your time like someone training for a marathon - train (attend lectures and practicals), build up your distances (study, attempt sample exam questions) and finish the race (pass your exam successively).

10. **PANIC!** There is no need to panic if you adopt a sensible and responsible attitude to your studies. Don't worry about other students saying they have the entire course covered and all the possible answers prepared. Work at your own pace but remember that you sit the examination as an individual so it is up to you to ensure that you pass the exam and get the best possible marks.

- Professor Kevin Kavanagh

Department of Biology Policy on Plagiarism

Definition of Plagiarism

Plagiarism involves an attempt to use an element of another person's work, without appropriate acknowledgement in order to gain academic credit. It may include the unacknowledged verbatim reproduction of material, unsanctioned collusion, but is not limited to these matters; it may also include the unacknowledged adoption of an argumentative structure, or the unacknowledged use of a source or of research materials, including computer code or elements of mathematical formulae in an inappropriate manner.

The policies of the University apply within the Department of Biology, as contained on the Maynooth University website (https://www.maynoothuniversity.ie/university-policies/rules-regulations-students). Plagiarism is a form of academic dishonesty and will be treated with the utmost seriousness wherever discovered.

This policy will be implemented in the accordance with Department of Biology Policy on Plagiarism.

1. Dealing with Suspected Cases of Plagiarism: Assignment markers will refer suspected cases of plagiarism to the Module Coordinator (or in the case of practical assignments, in first instance to the Academic in charge of practical module); Any student submitting written work for continuous assessment can be asked by the marker or the department to take a further test. This may take the form of an oral examination on the assignment in question and related issues, or the writing of a test paper in controlled conditions. Requiring a student to take such a test does not necessarily imply that plagiarism is suspected.

2. Dealing with Proven Cases of Plagiarism: If there is evidence of plagiarism, the matter will be turned over to the Course Coordinator, who will determine the disciplinary consequences following the guidelines outlined below. **In each case the student may be invited to explain in person** to the Course Coordinator the origin of the material contained in the piece in question.

Procedures

i. Where a marker ***(or course coordinator)*** believes that a case of plagiarism has been identified, the matter shall be referred to the Head of Department with a written report outlining the reasons for suspecting that the work has been plagiarised.

ii. The Head of Department shall then make an initial finding as to whether or not plagiarism has occurred, taking account of factors including, but not confined to, the extent of the plagiarism, indications of intent to deceive, the student's prior history in this regard, practice within the discipline, and the level at which the student has submitted the work. The Head of Department will not take account of extenuating medical or personal circumstances in making a decision.

iii. If the Head of Department is the marker who suspects plagiarism has occurred, he or she shall delegate responsibility to a nominee in that department to follow the procedures laid down in this policy

iv. Where the Head of Department determines that plagiarism has not occurred but there are indications of incorrect citation, the work shall be awarded a grade that takes account of the failure to cite sources correctly, within the overall context of the work as a whole.

v. Where it is considered right to do so, the Head of Department shall confirm the determination that plagiarism has occurred by making a record of the decision setting out the reasons. At this point, the Head of Department shall consult the Registrar's Office, informing the Registrar of the finding, and requesting any information on previous findings in relation to the student. Should prior findings exist, the procedures in xi and xii shall apply.

vi. Where the Head of Department determines that plagiarism has occurred, a meeting with the student shall be convened to inform the student of the finding.

vii. The student shall be advised of the determination by the Head of Department and of the consequences that may unfold and that a response should be received by the Head of Department from the student within ten working days from the date the determination was confirmed.

viii. The student shall be advised that failure or refusal to respond within the designated period of time, or failure or refusal to attend for any meeting requested by the Head of Department, will result in the matter being referred to the **Academic Discipline Board of Maynooth University** in like manner as if the student had chosen not to accept the findings of the report.

ix. Where the student chooses not to accept the findings of the report, the matter shall be referred to the **Academic Discipline Board of Maynooth University** together with all relevant documentation and reports.

x. Where the student accepts the findings of the report, the student shall be asked to sign the report. The Head of Department shall then countersign the report. The Head of Department will then give the work a mark of 0. The student will be allowed to redo the assignment before a designated deadline prior to the next Examination Board meeting, if it is practical to do so. The mark for the resubmitted work will be capped at 40%. A record shall be kept in the Department of the incident, and this shall be forwarded to the Registrar's Office.

xi. In the case of a second finding of plagiarism in relation to a student, the matter is automatically referred to the Academic Discipline Board, who shall notify the student that the matter has been brought to its attention.

xii. A "second finding" in this regard may refer to findings made in the current academic year or in previous academic years, and it may refer to findings made by more than one Department."
-***(Maynooth University Policy on Plagiarism)***

2a. Minor Plagiarism: In cases of minor plagiarism, the following will apply:
In instances where an element forming part of an assignment (from a phrase or sentence up to a paragraph or two) is found to be plagiarised, marks will be deducted for that assignment, there will be no possibility of submitting a 'make-up' assignment, and previous and subsequent work submitted in connection with the course may be subject to particular scrutiny. While the amount of marks deducted will be proportionate to the extent of the plagiarised material, the deduction may be severe.

2b. Major Plagiarism: In cases of major plagiarism, the following University statutes will apply:
In instances where a significant part or all of an assignment is found to be plagiarised, the Department will "award a mark of zero in the assignment, with no chance to resubmit in the current academic year" ***(Maynooth University Policy on Plagiarism),*** and previous and subsequent work submitted in connection with the course may be subject to particular scrutiny. In serious cases the plagiarism will be referred to the **Academic Discipline Board.**

2c. Postgraduate Students: Instances of postgraduate plagiarism will be referred directly to the project supervisor or member of faculty responsible for the relevant postgraduate programme. "Instances of plagiarism among postgraduate research students will be treated as being particularly serious. The Board will not take into account extenuating medical or personal circumstances in making its decision.." **(Maynooth University Policy on Plagiarism).**

3. Recording: All cases of plagiarism will be recorded by the Course Coordinator on the student's permanent record card. All members of the Department providing a reference for a student **may be obliged to mention an instance of major plagiarism**, or two or more instances of minor plagiarism, when providing a reference for the student.

Biochemical Calculations Website: Biochemicalc™

http://www.biochemicalc.com

Students in the Department of Biology now have access to Biochemicalc™. This website, developed by Professor Sean Doyle (Biology) and Mr Dermot Kelly (Computer Science), allows students to:

1. Learn the fundamental concepts of biochemical calculations such as:

> What are moles, nanomoles and micrograms? Why do I need to use moles in my calculations? How do I make up laboratory solutions such as buffers? What is molarity?

2. Use online calculators to help solve biochemical problems.

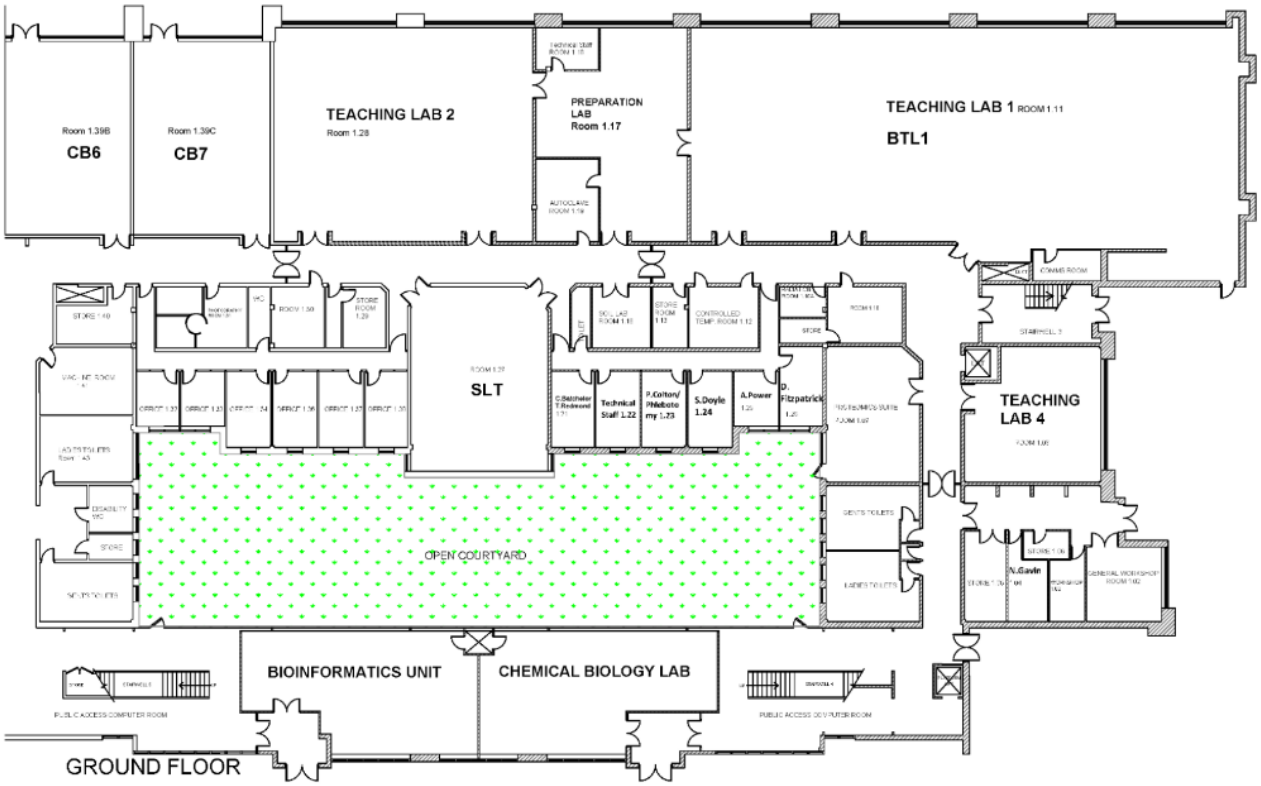
> The online calculators allow students to calculate the weights (in mg or g) of reagents required for making up laboratory solutions of defined molarity, calculate the volume of stock solutions required for preparation of a more dilute reagent, carry out %(w/v) dilutions, work out how to do serial dilutions etc…

3. Practice online questions to test their understanding of biochemical calculations.

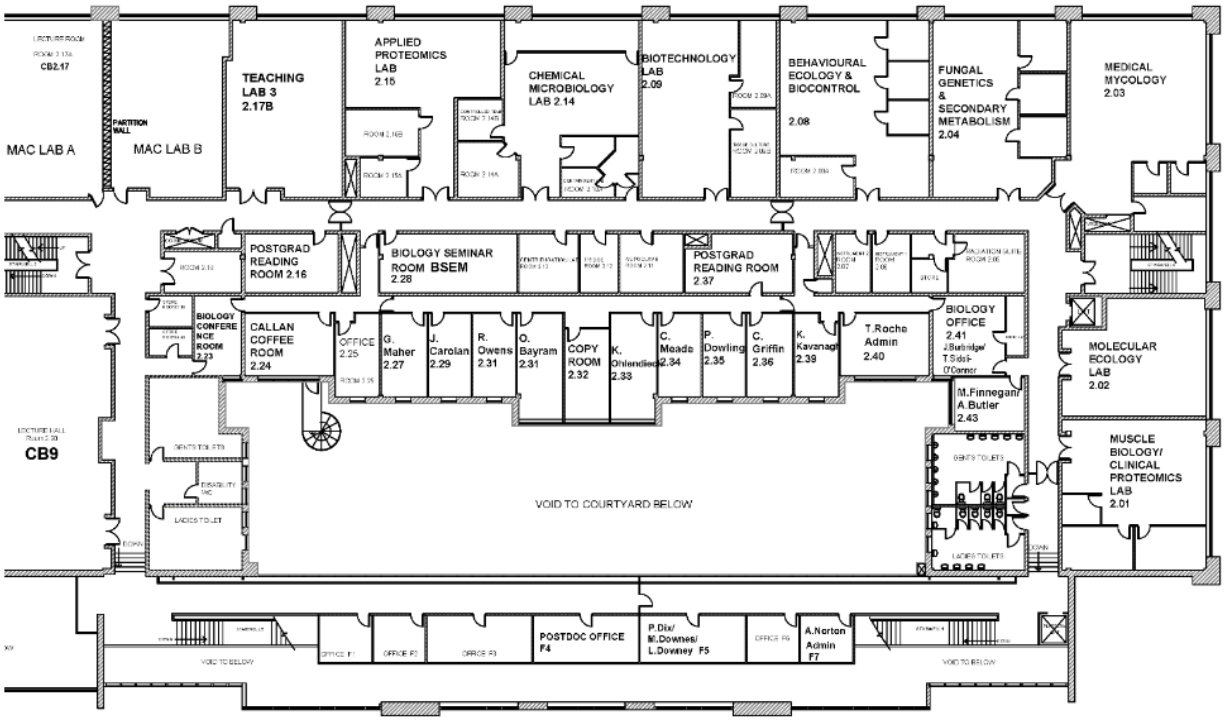
> Biochemicalc™ offers a suite of pre-formatted questions to help students judge if they understand key concepts required for becoming proficient at undertaking laboratory calculations. These questions are of varying difficulty and style, and are designed for use in association with the online calculators on the Biochemicalc™ website.

Although primarily designed for students in the 3rd and 4th years of our degree programmes, it will also be of assistance to students at earlier stages of study. Indeed it may be of use to students taking Chemistry, or any subject requiring knowledge of laboratory calculations. Postgraduates may also find aspects of Biochemicalc™ beneficial to their own research projects and also find use of its functionalities a useful "double-check" for their own laboratory calculations.
We encourage you to use Biochemicalc™ and please tell others if you're happy with it. If not, please email: biochemicalc@gmail.com

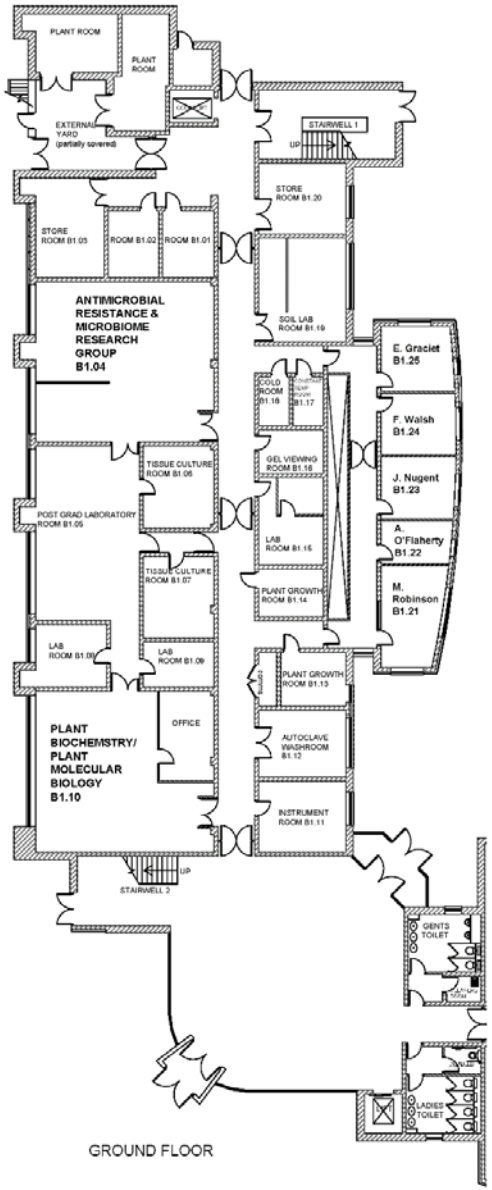
Biochemicalc™ was funded by the Maynooth University CTL Fellowship Programme 2011



CALLAN

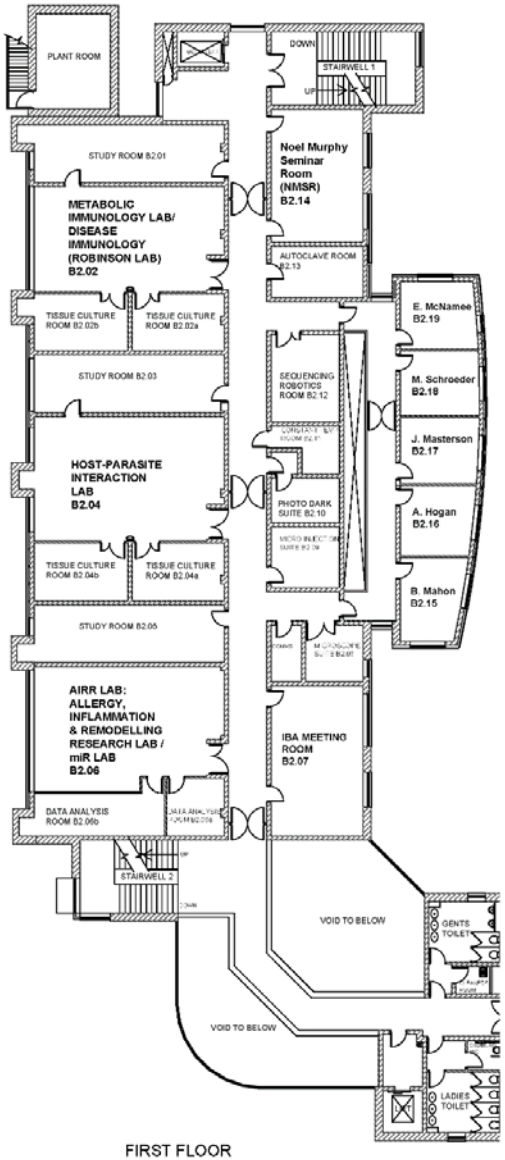


CALLAN



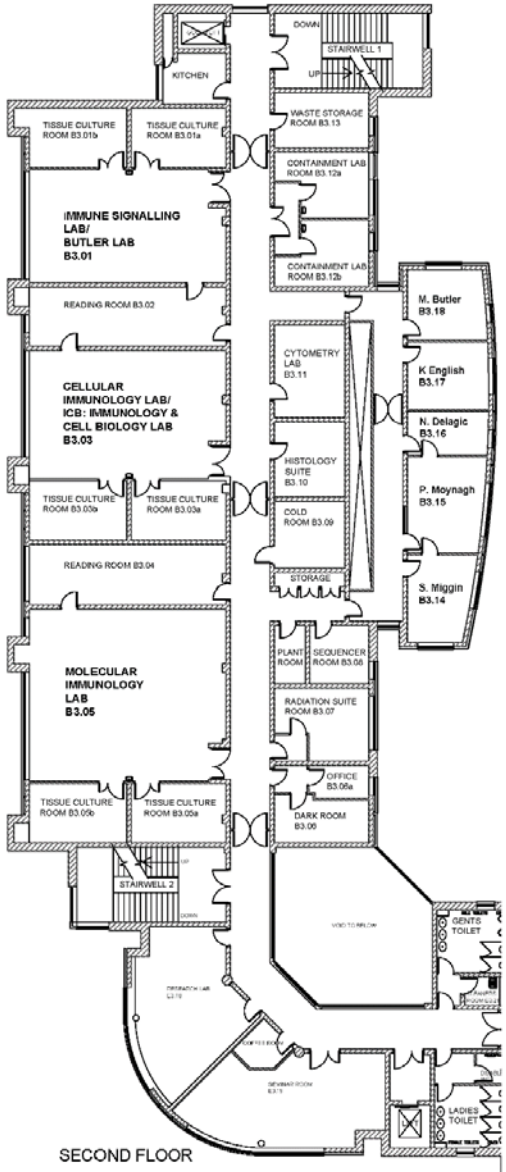
GROUND FLOOR

BIOSCIENCE BUILDING



FIRST FLOOR

BIOSCIENCE BUILDING



SECOND FLOOR

BIOSCIENCE BUILDING