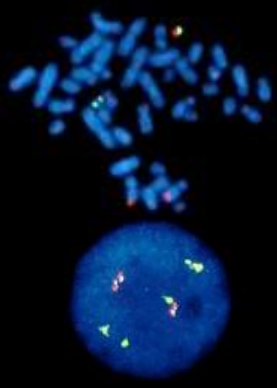
University of Sheffield

Human and Molecular Genetics MSc



BIST06 Course Handbook 2024-25

Human and Molecular Genetics MSc

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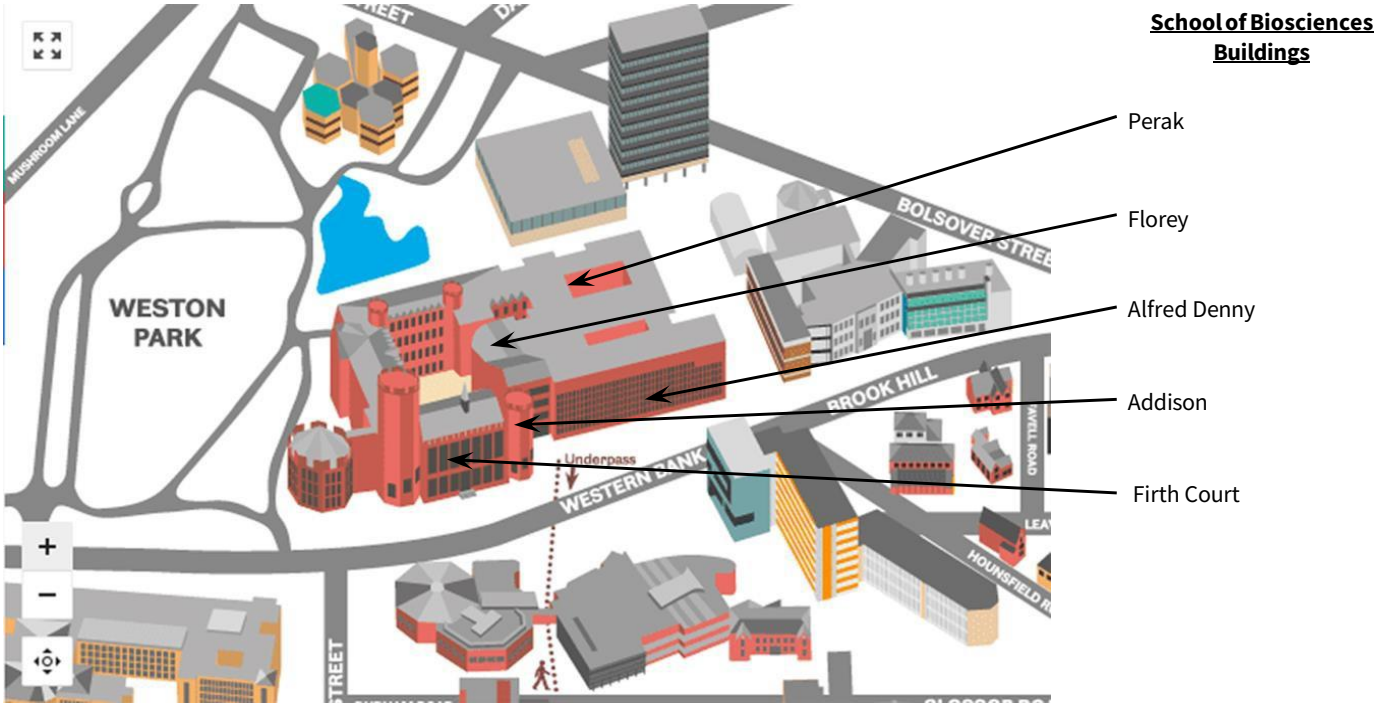
Welcome to the School of Biosciences

The School of Biosciences celebrates over 100 years of research and teaching in Bioscience at the University of Sheffield. We are a large school comprising around 120 academics and >1500 undergraduate and post-graduates (taught and research). In addition, a number of technical, support and secretarial staff complete the structure and organisation of the School. In the School, you will find expertise spanning the breadth of bioscience and excellence in both teaching and research. In the most recent review of higher education quality in the UK, our School was awarded top scores for teaching (24/24) and was ranked 4th nationally for research in Biological Sciences in the Research Excellence Framework (REF 2021). If you wish to know more about our ranking in research, follow this link:

We occupy several buildings in the University campus, including the Addison Building, the Florey Building, the Alfred Denny Building and Firth Court.



School of Bioscience Admin Office: Room C102, Ground Floor, Firth Court (Next to Krebs café)

Student Notice boards: Outside the E4 Teaching Laboratory (Firth Court)

The Faculty of Science

The School of Biosciences together with the School of Mathematical and Physical Sciences and the School of Psychology are part of the **Faculty of Science**. It oversees all the arrangements that Schools make concerning teaching, examinations and the award of degrees. The Faculty is responsible for ensuring that the University Regulations concerning teaching and examining are upheld and that standards are maintained.

Welcome to Firth Court

The Human and Molecular Genetics MSc laboratory is situated within Firth Court, one of the original University buildings dating from 1905. Firth Court's ivy-clad walls and formal quadrangle are situated next to Western Park and its museum. The building stands at the heart of the University campus, adjacent to the Union of Students and the Library, five minutes from the Goodwin Sports Centre and 15 minutes from the city centre.

On entering the building, the traditional exterior gives way to 50 modern research and teaching laboratories located on four floors, tutorial and seminar rooms and lecture theatres. It is a busy building, with 30 academic staff, around 50 research staff and over 70 PhD students working in a lively research setting, which provides a stimulating learning experience for our postgraduate MSc students.

The Human and Molecular Genetics Laboratories are located on E floor of Firth Court and include a specifically designated teaching laboratory, tissue culture facilities for growth and maintenance of human cell lines and microscopy facilities.

Human and Molecular Genetics MSc

Important Contacts

This document contains induction information for you to make a smooth and safe start to your time in Sheffield. You first need to make sure you have registered and collected your UCards. If you are not fully registered, please contact your Course Director Dr Dave Turton who will help you to resolve the situation. After you have registered you will be able to log in to "MUSE" to gain access to your University of Sheffield account, which includes;

- **Blackboard** – Teaching Platform for all of your module content.
- **Google Meet** – Online conferencing software
- **Google Drive** – Online digital storage where you have a free storage allowance as a student
- **Google Mail** – Main method of communication between you and the department
- **Google Calendar** – Tutorials, meetings and many teaching sessions are arranged via this calendar

Important contacts:

Head of School	Prof Rob Freckleton (R.Freckleton@sheffield.ac.uk)
Director of Learning and Teaching	Prof Dylan Childs (D.Childs@sheffield.ac.uk)
Director of PGT	Dr Dave Turton (david.turton@sheffield.ac.uk)
MSc Human and Molecular Genetics Director	Dr David Turton (David.Turton@sheffield.ac.uk)
Director of the Julia Garnham Centre	Dr Adam Hodgson (A.Hodgson@sheffield.ac.uk)
PGT tutors (for pastoral support)	Dr Marion Germain and Dr Qaiser Sheikh (biosciences-pgt-tutors@sheffield.ac.uk)
Bioscience PGT Admin team (administrative support)	pgtadmin.biosciences@sheffield.ac.uk

Human and Molecular Genetics MSc

When you arrive & MSc induction

Intro Week commences on Monday 23rd September 2024, this is where it all begins! The School has worked to bring you a host of events and talks to help you understand what to expect over the next academic year, and get to know others on your course.

Please refer to information provided on the pre-arrival webpage, to make sure you attend all the events. During your course induction (**Friday 27th September 1pm, Alfred Denny Building Lecture Theatre 1)** you will receive all the information that you will need to hit the ground running. In the w/c 30th September we will also give you a tour of the School so you know where to find everything.

This year your safety is of the upmost importance. We have arranged a series of health and safety trainings to make sure you understand how to behave in a lab environment and work safely. Details of what training you are required to complete can be found in the general PGT handbook.

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Your academic year

Autumn Semester

Monday 30 September to Saturday 21 December 2024	(Teaching period 1: 12 weeks)
Monday 23 December 2024 to Saturday 18 January 2025	(Christmas Vacation: 4 weeks)
Monday 20 January to Saturday 8 February 2025	(Examination period 1: 3 weeks)

Spring Semester

Monday 10 February to Saturday 5 April 2025	(Teaching period 2: 7 weeks)
Monday 7 April to Saturday 26 April 2025	(Easter Vacation: 3 weeks)
Monday 28 April to Saturday 14 June 2025	(Teaching period 2 cont : 8 weeks - including examination period 2)

Summer Period

Monday 16 June to Saturday 5 July 2025	(Teaching period 3: 4 weeks)
Saturday 5 July to Saturday 17 August 2025	(Write up and assessment period: 6 weeks)

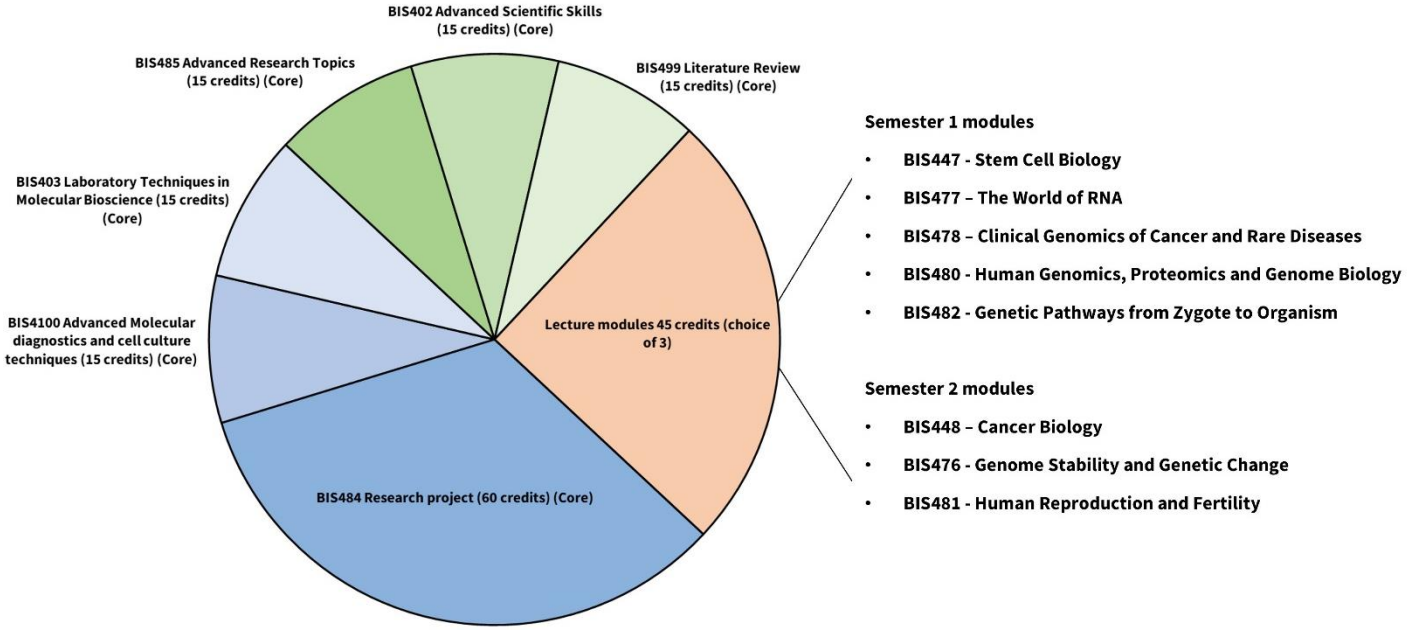
NHS Work Placement opportunities

The Human and Molecular Genetics MSc programme was developed in partnership with NHS Geneticists from the Sheffield Diagnostic Genetics Service (SDGS), which is based in the Sheffield Children's Hospital NHS Foundation Trust. This close relationship enabled the creation of the **Julia Garnham Centre,** our NHS partnered facility where we offer our NHS work placement opportunities as part of your MSc research project. Details of the nature of the placement opportunities and research projects will be provided to you by **Dr Adam Hodgson**, the Founder and Director of the Julia Garnham Centre.

Human and Molecular Genetics MSc

About the course

The MSc Human and Molecular Genetics is a 180-credit degree where your education is 50% laboratory based (**blue**), 25% taught theory (**orange**) and 25% skills training (green).



Lecture modules

The course includes 45 credits of lecture modules that cover central issues relating to human genetics and genetic disease. Students must choose 3 lecture modules from 8 options (BIS447, BIS448, BIS476, BIS477, BIS480, BIS481, BISL482,). Lecture modules are timetabled for between 9am and 2pm, Monday to Friday during the autumn and spring teaching periods and scheduled to be delivered in-person but will also be recorded and distributed via Blackboard.

When choosing your optional modules, we encourage you to consider spreading your academic workload across the year, e.g. not choosing all three lecture modules in semester 1. This presents a very high workload alongside other modules such as your laboratory training, literature review and skills modules. Please speak to Dr Dave Turton if you require guidance or help with this.

Laboratory modules

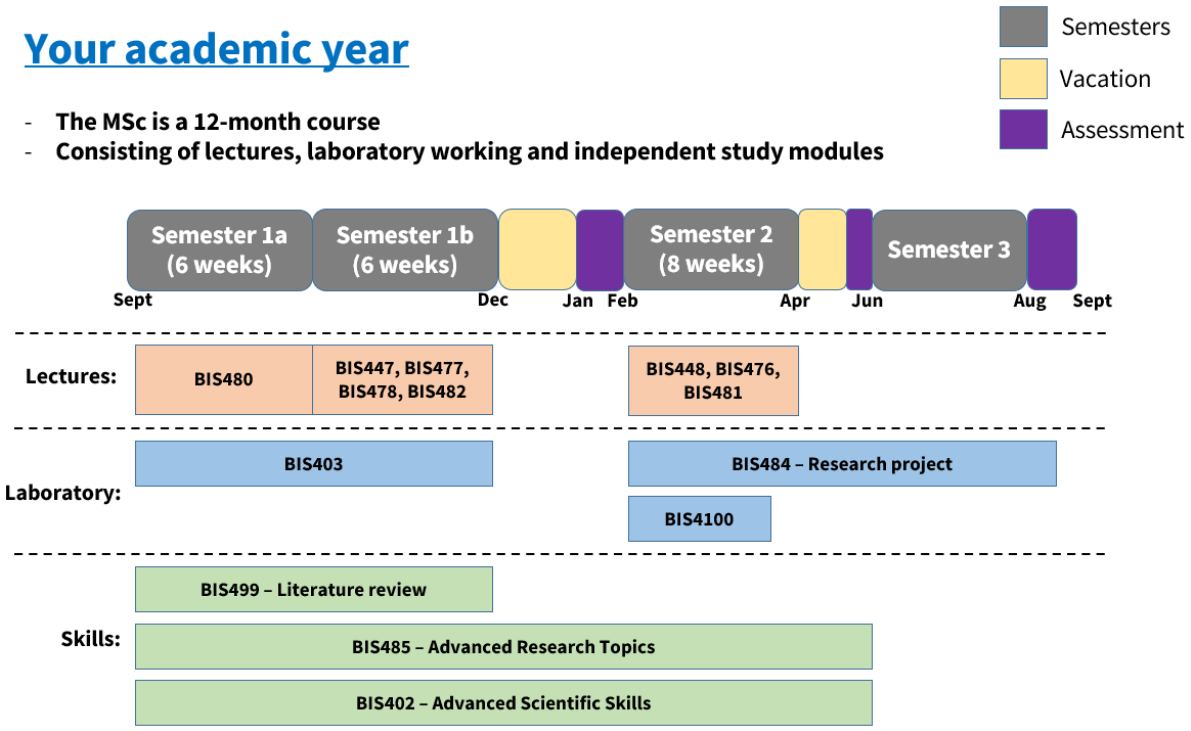
Half of your experience on the Human and Molecular Genetics MSc is in the laboratory. Twelve weeks of laboratory training are provided in the autumn semester as part of BIS403 (Laboratory Techniques in Molecular Bioscience), followed by six weeks of advanced training at the start of the spring semester as part of BIS4100. You will then use all of these skills during your research project (BIS484) in the spring and summer teaching periods. The timing and duration of laboratory sessions are organised to meet the particular demands of experiments and avoid clashes with lectures, seminars and tutorials, however this cannot sometimes be avoided. On average you should be ***available*** to be in the laboratory 5 days per week (Monday to Friday) for approximately 8 hours per week during the autumn teaching period, and roughly 4 hours per day for the spring and summer teaching periods.

Independent study modules

The ability to self- learn is an important skill for postgraduates. MSc Human and Molecular Genetics includes 2 independent study modules that run in the autumn and spring teaching periods and include BIS499 (Literature Review) and a seminar and tutorial-based module; BIS485 (Advanced Research Topics).

Human and Molecular Genetics MSc

Your academic year



HMG MSc assessment map 2024/25

		Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Core	BIS402		Essay	Essay		Exam		Peer review workshop					
	BIS403		Milestone report										
	BIS499				Literature review								
	BIS484												Dissertation Viva Poster Presentation
	BIS485								Essay		Exam		
				Presentation									
	BIS4100							Training diary/reflec...					
Optional (Choose three)	BIS447					Exam							
	BIS477					Exam		Presentation					
	BIS478					Exam							
	BIS480				Essay	Exam							
	BIS482					Exam Graphical abstract							
	BIS448									Exam Essay			
	BIS476										Exam		
	BIS481										Exam		

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A breakdown of individual modules can be found on the following pages.

Laboratory modules

BIS403 Laboratory Techniques in Molecular Bioscience

Core Module (Coordinator: Dr David Turton) Autumn semester (15 credits).

This module will provide background knowledge, technical training and practical laboratory experience in key techniques in molecular bioscience with a focus on human genetics. In particular, the module is designed to develop and practice core genetic and biochemical techniques to enable students to be technically confident and prepared for a research project and career in the field of genetics and molecular bioscience. Students will receive training in a number of commonly used and cutting-edge techniques. For instance, students may be trained in CRISPR genome editing technology in addition to other molecular biology techniques, including; protein and DNA isolation, 2D protein gel electrophoresis, Western analysis, protein over-expression, PCR, plasmid construction and restriction mapping.

- Aseptic technique
- Cryo-storage, growth, maintenance, cell lysis, transformation and CRISPR Cas9 gene editing techniques in *S.cerevisiae.*
- Plasmid construction, cloning and isolation
- Genomic DNA extraction
- Diagnostic and high fidelity PCR
- Recombinant DNA cloning and handling
- Diagnostic restriction digestion of DNA and restriction site mapping
- Agarose gel electrophoresis, visualisation and gel documentation, gel purification and extraction
- Protein extraction and purification
- Protein SDS-PAGE fractionation
- Western blotting, immuno-detection and imaging.

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BIS484 Research Project

Core Module (Coordinator: Dr David Turton and Dr Adam Hodgson) Spring semester and summer period (60 credits).

The Research Project provides approximately 200 hours of laboratory training and supervision. New for this year is all of our MSc research projects will be offered with the Julia Garnham Centre. Here students will receive clinical training and undertake an NHS work placement (dependent on minimum performance requirements) before using the data generated here to inform your wet laboratory work.

The module can include extensive training in clinical genetic diagnostic techniques such as human cell culture, karyotype analysis, fluorescence in situ hybridisation (FISH), quantitative PCR and variant sequence analysis.

Examples of previous research projects include:

- Maintaining genomic stability: Understanding the interplay between RNA regulation and telomere integrity
- Genomic Haemato-Oncology Diagnostics: Improving Patient Outcomes for The Myelodysplastic Syndromes (MDS)
- Clinical Functional Genomics of Peroxisomal Disorders: Establishing a pipeline for the classification of clinical variants.
- Determining the hole of hnRNP proteins in the 3-Dimensional organisation of the genome and neurological disease

Information around research project choices will be shared with you in semester 1. Your research project is expected to be driven by you, including experimental design, planning, implementation and data analysis. We will have regular laboratory meetings as a cohort to discuss your work and set objectives to be completed.

Independent learning core modules

BIS4100 Advanced Molecular diagnostics and cell culture techniques

Core Module (Coordinator: Dr David Turton) Spring semester (15 credits).

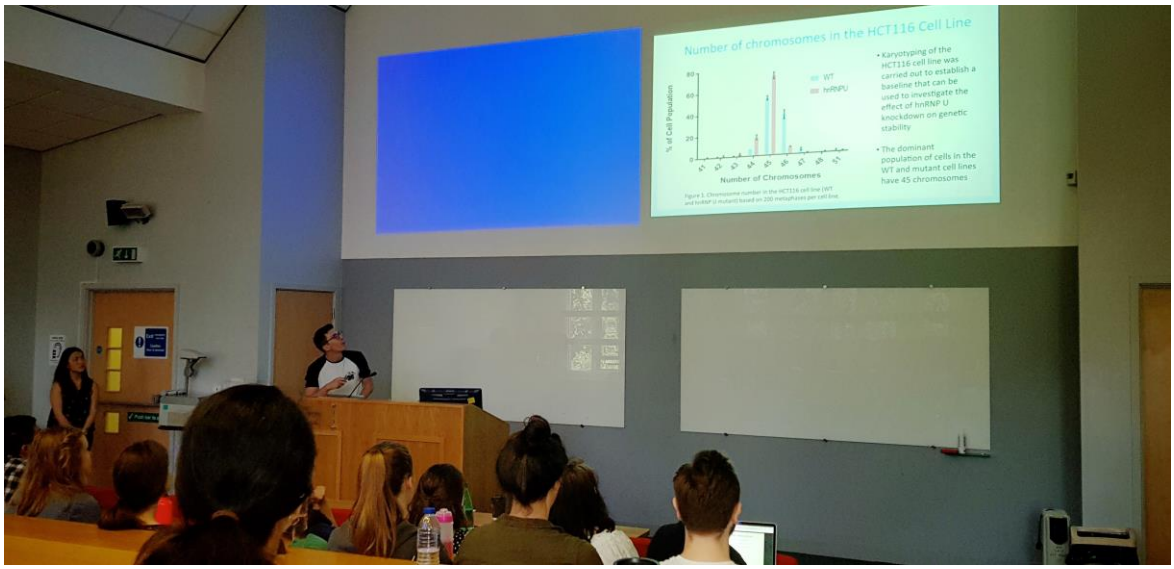
New for 2024 is our Advanced Molecular diagnostics and cell culture techniques module. Through competence-based learning you will receive specialist training in techniques such as human cell culture, cytogenetics, fluorescence microscopy and qPCR over a six week period.

This module is pass/fail only and is dependent on achieving minimum performance targets across components of the module. You will complete a training journal and reflections on your learning to demonstrate competence in these advanced practical techniques.

BIS499 Literature Review

Core Module: (Coordinator: Dr Adam Hodgson) Autumn semester (15 credits)

This unit involves an in-depth survey of the current literature relevant to the research area of the student's project. The literature review will involve extensive reading of original research papers, reviews and books together with information extracted from other media. The student should demonstrate an ability to comprehend and synthesise the information presented in the literature, to critically appraise previous studies and identify gaps in the knowledge. The student will also be required to critically analyse hypotheses in the field and the quality of the evidence used to support them. Where controversies exist the student should be prepared to indicate which side has the stronger case. The literature review should also identify gaps in our current knowledge and understanding and make suggestions for the future developments in the field.



BIS485 - Advanced Research Topics

Core Module: (Coordinator: Dr Phil Mitchell) Autumn and spring semesters (15 credits)

This unit will develop the ability of students to acquire information through the medium of research seminars and published scientific papers, and develop their critical analysis skills of research data. Students will attend research seminars and demonstrate their ability to summarise the information and reflect on their learning. They will also attend a journal club, in which they will present a recently published research paper that summarise the content and impact to other students. Assessment of the unit will be on the basis of the journal club presentation, a short report on the research seminars attended, and a formal examination testing the students' skills in data analysis and interpretation.

BIS402 Advanced Scientific Skills

Core Module: (Coordinator: Dr Anne-Gaelle Borycki) Academic year (15 credits)

This module builds on existing, and further develops, generic scientific skills to equip postgraduate taught students with strong competences in presenting and reporting their research work using written and oral formats, in analysing data and the scientific literature, and in acquiring and extending their critical analysis skills. Teaching will be delivered using a blended approach with a combination of lectures, workshops, tutorials and seminars together with independent study and on-line teaching. Taught throughout the academic year, the module will be articulated around three units addressing: Unit 1) Scientific presentation skills. In this unit, students will explore how to develop their academic (writing and oral) presentation skills. Some of the topics taught may include how to formulate a research question and hypothesis, how to find information, and how to structure a scientific essay or report. Students will learn how to communicate effectively their research to a scientific, as well as lay, audience. Emphasis will be placed on short oral communications and poster preparation and presentation. The learning objectives will be acquired through lectures, workshops, tutorials and independent study. Unit 2) Critical analysis skills. This unit prepares students to develop their ability to analyse and appraise the scientific value of the published and unpublished literature. Workshops and lectures will introduce students to the process of critical appraisal of scientific work. Unit 3) Statistics and data analysis skills. In this unit, students will learn methods to gather and analyse large datasets. In particular, workshops and lectures will teach students the basics of R coding and statistics for application in biosciences. The unit may also deliver other forms of data analysis relevant to the programme of study. Teaching within this unit will be delivered mainly through on-line material, lectures and workshops. Independent study will be essential to complete the acquisition of skills.

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Lecture module choices

Students must register to a total of 45 credits of lecture modules as part of their MSc degree course and must therefore choose 3 lecture modules from the 8 options available. Each lecture module is worth 15 credits in total and are assessed by either examination, or examination with coursework. You will be able to discuss your module choices with a member of academic staff during intro week.

BIS447 Stem Cell Biology

Optional Module 7: (Coordinator: Prof Marcelo Rivolta) Autumn semester (15 credits)

This lecture course will provide a thorough grounding in the biology of stem cells and regenerative medicine, with special reference to the molecular and genetic control of cell fate specification and differentiation. Students will also be encouraged to consider the clinical use of stem cells and their derivatives as well as the ethical issues that these raise. As this is a rapidly developing field, strong emphasis will be placed on understanding the current controversies in the literature.

Assessment – 3hr Online Exam (100% of module)

BIS448 Cancer Biology

Optional Module 7: (Coordinator: Prof Carl Smythe) Spring semester (15 credits)

The unit will provide a description of the nature of genomic complexity as revealed using next generation sequencing technology. It will explore cancer genotypes and phenotypes in the context of 8 essential characteristics that are common to all cancers, and which collectively dictate malignant growth. These characteristics are : self-sufficiency in growth signals, insensitivity to growth-inhibitory signals, evasion of programmed cell death, limitless replicative potential, sustained angiogenesis, tissue invasion/metastasis, avoidance of immune destruction, and de-regulated cellular energetics. It will discuss how genome instability arises, and together with tumour-promoting inflammation, how these enable the emergence of all other cancer characteristics. It will utilize this conceptual framework to discuss recent and future developments in cancer therapeutics. A brief review of fundamental principles in genetics and molecular cell biology will be given. Nevertheless, students should have a basic understanding of genetics, molecular biology and cell biology.

Assessment – 4hr Online Exam (65% of module)/coursework (35% of module)

BIS476 Genome Stability and Genetic Change

Optional Module 1: (Coordinator: Prof Sherif El-Khamisy) Spring semester (15 credits)

The module examines in detail the mechanisms that maintain genome integrity and generate genetic variation, both of which are essential to eukaryotic life. The lectures illustrate how the prevention and creation of changes in DNA make use of the same biochemical machinery. The main emphasis is on eukaryotes; reference is made to prokaryotes mainly as an aid to understanding the importance of conserved processes. Mechanisms studied in detail include single-strand break repair, protein-linked DNA break repair, homologous and non-homologous recombination, avoidance of replication errors, mismatch repair, excision repair and mutagenesis. Throughout the module experimental detail is included to illustrate how conclusions on gene function and interactions have been determined.

Assessment – 2hr45min Exam (100% of module)

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BIS477 The World of RNA

Optional Module 2: (Coordinator: Prof Stuart Wilson) Autumn semester (15 credits)

This module will analyse the vital roles that RNA plays in the life of a cell and how RNA is increasingly used as a tool to understand biology. The module will cover the following 'cutting edge' research topics: RNA interference, CRISPR Genome Editing, non-coding RNAs, together with the latest work on well known RNA based activities. These include transcription, RNA splicing, RNA stability, RNA export and translation and how all these processes are coupled in the cell to ensure efficient, quality-controlled gene expression. The module aims to present the latest innovations and discoveries in the RNA world and their application.

Assessment – 2hr Exam (67% of module)/oral presentation (33% of module)

BIS478 Clinical genomics of cancer and rare genetic diseases

Optional Module 3: (Coordinator: Dr Adam Hodgson) Autumn semester (15 credits)

This module will address the ways in which genetic factors influence our lifetime health. The module will focus on classic examples of leukaemia, lymphoma, solid tumours, rare inherited diseases and those commonly identified in prenatal diagnostic studies using real patient scenarios. The molecular and cytogenetic technologies and the underlying clinical diagnostic strategies will be discussed to provide students with a thorough understanding of clinical genomic diagnostics across the breadth of human acquired and inherited diseases. This module will be delivered by a combination of academic staff from the university, and clinical geneticists from the NHS.

Assessment – 2hr Exam (100% of module)

BIS480 Human Genomics, Proteomics and Genome Biology

Optional Module 4: (Coordinators: Dr Roy Chaudhuri, Dr Ian Sudbery) Autumn semester (15 credits)

A top-down approach to biology, simultaneously investigating the structure and function of the entire genome and its products, both contrasts with and complements the traditional gene-by-gene approach, allowing us a birds-eye view. In this module, we cover genome-wide approaches to studying the genetic causes and diagnosis of complex and polygenetic human disease. We then discuss how methods such as RNA-seq, ChIP-seq and 4C can be used to investigate the genome-wide transcriptional profile, the chromatin landscape and the three-dimensional structure of the genome. Finally, we describe the use of technologies such as mass spectrometry to investigate the complete proteome of a cell. The module builds on the material from the level 2 module Genes, Genomes and Chromosomes, to illustrate how cutting-edge genomic and proteomic methods can be used to address fundamental biological questions.

Assessment – 2hr Exam (60% of module)/coursework (40% of module)

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BIS481 Human Fertility and Reproduction

Optional Module 5: (Coordinator: Dr Emma Jones) Spring semester (15 credits)

This module will address some of the processes underlying human fertility: that is, hormonal regulation of the reproductive systems, gametogenesis and fertilisation. The module will then consider methods of contraception, reasons for infertility, and issues relating to the assisted reproductive technologies. Finally, the importance of genetic imprinting will be discussed, together with a consideration of the impact of failures in imprinting.
Assessment – 2hr Exam (100% of module)

BIS482 Genetic Pathways from Zygote to Organism

Optional Module 6: (Coordinator: Dr Stuart Casson) Autumn semester (15 credits)

Multicellular organisms develop from a single zygote and in the case of humans, culminates in a mature human body consisting of over a trillion cells and around 200 different cell types. This module will examine the developmental mechanisms and genes that regulate pattern formation and cell identity in multicellular eukaryotes. We will focus on the role of key genes in the regulation of different developmental processes and the mechanisms that determine the correct temporal and spatial expression of these genes. We will illustrate these principles using examples from model organisms including Mus musculus, Caenorhabditis elegans, Drosophila melanogaster and Arabidopsis thaliana. These systems have significantly informed our understanding of human disease but also demonstrate the different mechanisms through which cell fate and complexity are controlled.
Assessment – 2hr Exam (66% of module)/coursework (34% of module)

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Overall Assessment of the Degree

The University Regulations for award of higher degrees can be found in the rather lengthy document at https://www.sheffield.ac.uk/calendar. The most important points are covered on pages 105 to 106. The following summarises the key points, but please refer to the document above for the absolute authority on these matters.

To pass a module you must score a mark of 50 or greater.

To pass the examination for a Master's Degree you must pass modules to the value of 180 credits; or to the value of 165 credits at the examiner's discretion and subject to certain requirements (see regulation 26).

You can also be awarded your degree with distinction or with merit.

Your overall grade will be calculated from a weighted mean of your individual module grades (weighted according to the number of credits for that module).

It should be noted that the award of with distinction or with merit is at the discretion of the examiners, subject to the following guidelines:

- To obtain the degree with distinction you should have a weighted mean grade of 69.5 or greater, and score 70 or greater in units to value of not less than 90 credits.

- To obtain the degree with merit you should have a weighted mean grade of 59.5 or greater, and score 60 or greater in units to value of not less than 90 credits.

The possible awards in the event of failing to accrue the necessary number of credits, and regulations for resits, are detailed under the University Calendar.

If at any time you are concerned about your progress, please do not hesitate to talk with your supervisor.

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Learning and Teaching

Your Responsibilities

University students are expected to take a large share of the responsibility for their own learning. You will be expected to:

- attend all lectures, practical classes, field courses, tutorials and examinations that are a part of your degree course
- arrive at all lectures, practical classes and tutorial punctually;
- accept responsibility for carrying out the appointed learning tasks set on the course. These may be note taking, reading, model construction, computation, production of illustrative charts or figures, thesis preparation, laboratory tasks or other activities.
- hand in all course work on the specified deadline (work handed in late may be penalised).
- do enough work to meet the requirements of your degree course.
- seek advice from staff when you are having difficulties with your course.

The Provision of Teaching. You can expect us to:

- provide teaching that is authoritative, up to date, planned and supported by appropriate materials such as illustrations, references or reading lists.
- give you aims and objectives for modules and degree courses that will clearly indicate what is expected of you.
- use fair and efficient methods of assessment.
- provide facilities that are fit for the purpose and in accordance with Health and Safety requirements.
- give you accurate information about courses, assessments and timetables.
- treat all students equally, regardless of age, gender and ethnic background.

Teacher's Responsibilities

The teacher and their colleagues are responsible for setting the timeframe, location and content of courses and for creating the learning tasks and assessments that attach to the courses and classes. A particularly important part of their role is the giving of feedback to students in the outcome of learning tasks. Most teachers are also examiners and assessors, though assessment is quite different and distinct from feedback.

How much work is enough?

You should expect to spend a minimum of 38 hours each week on your academic studies. A large proportion of this time will be spent in person work/studies, either reading and updating notes from lectures/practicals or reading the literature and performing experiments related to your project. The following is the calculation for the estimated time each student should spend studying during the MSc course:

- 1 credit is equivalent to 10 hours work
- Therefore, a 15 credit module corresponds to 150 hours of work over the whole year, including; lectures, reading, tutorials, presentations, essays, revision, exams etc.
- The whole MSc is 180 credits = 1800 hours
- For a 5 day week = 7.5 hours per day – equivalent to a full time job.
- Remember that 38 hours each week is a minimum; you will need to do more than this in the periods preceding examinations.

Attendance monitoring

As a student, it is most important that you attend regularly all the lectures, tutorials, laboratory sessions etc. that are listed in your timetable or that are communicated to you as the semester proceeds. It is only by attending all of the scheduled sessions that you will be able to learn effectively,

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Learning and Teaching

Students are expected to attend throughout each semester, including the full examination period. This means turning up on time to all designated teaching sessions, tutorial, laboratory sessions and all assessments. To help ensure that you make full use of the learning opportunities that are available, the department will be monitoring the attendance of students throughout the year. The monitoring will be carried out using systems that have been developed by the University specifically to help departments identify and support students who are having difficulty with their study programme.

You are also required to arrange a formal meeting with your supervisor or tutor at regular intervals. These meetings are an opportunity to discuss progress, problems, and set short and medium term goals. These interactions will be recorded on our Personal and Academic Tutoring System (PATS). Although you will probably discuss your project at some level on a daily basis with your supervisor, a record of these formal meetings is important to satisfy both your sponsor and the University that you are receiving an appropriate level of supervision. It is very important that these meetings are recorded in a timely manner. To comply with new UK legislation the University is required to monitor attendance of all students. Failure to demonstrate adequate progress and appropriate attendance will inevitably initiate enquiries from Research and Innovation Services, and for international students the UK Borders Agency.

NB: It is your responsibility to arrange these meetings. Its way be worth trying to fix a day e.g. first Monday of every month, or similar, with your supervisor as soon as possible. If you have difficulty in arranging meetings seek help from a member of the Staff Postgraduate Committee.

What happens if you do not do enough work?
The most obvious consequence of not doing enough work is that you are likely to fail the assessment for one or more modules. Remember that all MSc level modules are worth a minimum of 15 credits, and thus failing more than one module examination will result in the MSc degree not being awarded, and the obligation for the candidate to retake part or all of the failed module examinations. In some instances, failing one module examination may result in the MSc degree not being awarded! Further details are available from your supervisor.

What if you are ill or need to be absent for any reason?
If a student is absent from the University for a period of less than seven days, they should fill in the School self-certification google form found detailed in the PGT handbook.

If they are absent for more than seven days due to significant personal problems or illness they must complete an online Extenuating Circumstances (EC) form and provide relevant evidence as part of the form. MSc students are encouraged to contact the PGT Tutor. They can also get advice from the School Welfare and Engagement Officer Lucy via the biosciences-welfare@sheffield.ac.uk mailbox.

If students miss a compulsory session (for example a practical class, tutorial), regardless of whether the absence is short or long term, they are expected to catch up and complete the appropriate work and record this via the iSheffield app.

When you have been away due to illness, you should always contact the member of staff running any practical classes you have missed to see whether you need to catch up on any work or assessment. I f you need to be away for any other reason, for example due to personal problems, you should see you year tutor or degree course tutor before you go.

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Student Support

PGT handbook

The PGT handbook can be found at https://students.sheffield.ac.uk/biosciences/pgt and contains a wealth on information in the "Student Support" section to help with any issues you are facing. Please do not hesitate to contact someone such as your academic tutor, PGT Tutor or welfare team if you are having any difficulties.

Special Educational Needs/Disability

Support for students with a special educational need (SEN) or a disability is available both within the department and centrally through the University's Disability and Dyslexia Support Centre. For more information you can access their web pages at http:// www,sheffield.ac.uk/ssid/disabilities/index.html or by contacting the School of Biosciences Disability Liaison Officer Lucy Deakin (l.deakin@sheffield.ac.uk)

Mature students

Sometimes mature students can find returning to full time education a little daunting for numerous reasons. If you are a mature student you can gain support centrally from the Student Support Services or access the Mature Students web pages at http://www.shef.ac.uk/ssid/ welfare/mature/index.html

Student Services Information desk - SSiD

If you have problems concerning money, rights and welfare or housing, the Student Services Information Desk in the Students' Union (telephone; 0114 222 1299; e-mail, ssid@sheffield.ac.uk) has a team of professional advisors who are available to help on an individual basis. The Centre also produces a variety of leaflets, location maps, prospectuses etc. There are also several computers for student use, which allow you to browse the services available.

Complaints

We hope that you will not need to complain but if you do feel that you need to complain it would be helpful if you could first discuss your complaint with the person concerned or with your supervisor. If you do not wish to do this, then Dr Dave Turton is the appropriate staff member to approach. If your complaint cannot be resolved at this level, you should make an appointment to see the Head of the School Finally, if you believe that the School has not responded to your complaint you should arrange to see the Dean of the Faculty.

Health and Safety

HEALTH AND SAFETY INDUCTIONS FOR POSTGRADUATE TAUGHT (PGT) STUDENTS

PGT students are now able to access online H&S training via the Training Portal. Therefore, students are now expected to complete the Health and Safety Induction in the same way as Staff. See the School of Biosciences Intranet Induction page. All students must complete the tasks below before they are able to start working in the laboratory

Instructions for how to do this can be found on the "Health and Safety (Including PGT induction)" tab of the PGT handbook

This applies to:
PGT students carrying out lab work in a research lab or teaching lab

The Training Checklist must be printed off, completed and signed by both the student and the supervisor or PI, and then uploaded via a Google form. Links to these documents can be found in the Intranet Induction page linked above, as well as links to all mandatory training. In addition to the mandatory online training, all project students and PGT students must complete a local induction with their lab supervisor or PI. This must include instruction on

safe systems of work and where to find the safety documentation relevant to the students activities.

It's recommended that all students read through the local H&S guidance for the School of Biosciences. Details of this will be shared in your laboratory inductions.

Lab access
PGT students must follow an agreed programme of activity. There is an assumption that all work plans have been agreed during regular meetings between the lab worker and the supervisor.
Students will be able to activate their ucard for general access by completing the Training Checklist and submitting this via the Google form
Swipe access to specific rooms and Salto cards can be requested individually. Supervisors must email details including the room and ucard number to m.wyles@sheffield.ac.uk or a.chedgzoy@sheffield.ac.uk.

Out of Hours access
Core hours are 8am to 6pm, Mon to Fri

PGT students may work out of hours, but work must be risk assessed, and take into account the relevant experience of the individual carrying out the task, and the risk of the task, in the context of their being fewer support services around in case of an accident or emergency.

Please note we do not allow out of hours working as part of the HMG MSc.

Any person working outside of core hours must have completed all mandatory training, including the Out of Hours online course. They must have permission from their supervisor or PI to carry out the work, and have a specific risk assessment in place for the activity.

Other information
The School has a duty to provide a safe and healthy working environment, the detail of which is laid out in the Health and Safety at Work Act 1974, and subsequent legislation centred on this Act.

The Head of School is ultimately responsible for health and safety. Certain duties are delegated to officers with authority to act on behalf of the Head of Department. These officers are:

Safety Officer (DSO)	Mrs. S. Noble-Longster
Radiation Protection Supervisor (DRPS) Departmental	Mrs. S. Noble-Longster
Biological Safety Officer (DBSO) Departmental Laser Safety Officer	Dr. P. Mitchell Dr. P. Bullough

The University Of Sheffield.

Student enquiries

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