Programme Information		
Programme Title	Programme Code	HECoS Code
Medical Biosciences	B101	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
BSc	3 Calendar Years (	Full Time	Annually in October	180	360
DipHE	N/A	N/A	N/A	120	240
CertHE	N/A	N/A	N/A	60	120
The DipHE and CertHE are exit awards only and not available for entry. You must apply to and join the BSc in the first instance.					

Ownership			
Awarding Institution	Imperial College London	Faculty	Faculty of Medicine
Teaching Institution	Imperial College London	Department	Medicine
Associateship	Imperial College School of Medicine (AICSM)	Main Location(s) of Study	South Kensington Campus and Hammersmith Campus
External Reference			
Relevant QAA Benchmark Statement(s) and/or other external reference points		Honours Degrees in Biomedical Science Honours Degrees in Biosciences	
FHEQ Level		Level 6	
EHEA Level		1st Cycle	
External Accreditor(s) (if applicable)			
External Accreditor 1:	N/A		
Accreditation received:	N/A	Accreditation renewal:	N/A
Collaborative Provision			
Collaborative partner	Collaboration type	Agreement effective date	Agreement expiry date
N/A	N/A	N/A	N/A
Specification Details			
Programme Lead		Professor Alison McGregor, Director of Undergraduate Science & Head of BSc Medical Biosciences	

Student cohorts covered by specification	2025-26 entry
Date of introduction of programme	October 17
Date of programme specification/revision	March 25

Programme Overview

Our interdisciplinary programme offers an innovative approach to learning.

You will study fundamental human biology and the molecular basis of human disease. Modules on cellular and molecular biology and pharmacology underpin, for example, infectious diseases and immunology, cancer and neurobiology.

During the unique and exciting Lab Pod modules, you will work on real life research questions in a learning environment that mirrors an authentic research laboratory. You will explore a real scientific hypothesis and will be given opportunities to design, choose and perform experiments appropriate to test this hypothesis.

In addition, the Lab Pods will integrate experiences that will develop and consolidate theoretical topics covered throughout the year. They will encourage you to develop your understanding of the causes of diseases such as cancer, diabetes, neurodegeneration and autoimmunity, and experience how scientists work to develop treatments and cures.

You will learn to think like a scientist with a research-intensive, laboratory-focused curriculum, whilst workshops on critical health issues and modules in science communication and ethics will broaden your outlook and employability skills.

Our extensive and fully integrated transferable skills programme is designed to develop personal characteristics that employers value, including effective time management and resilience, good interpersonal, leadership, analytical and problem solving skills, as well as an awareness of ethics, coupled with excellent verbal and written presentation skills.

In your third year you will choose specialist modules that examine global health problems, and undertake a final year project. For this project you will have the opportunity to complete a 20-week intensive research project, a work placement, or a dissertation on a biomedical science topic. Placement possibilities may include industry, hospitals, publishing houses, museums, charities and government agencies.

Students interested in careers which do not involve laboratory research will be given the choice to pursue a shorter final year project, either in the form of a dissertation or placement in any topic related to biomedical sciences. You will be required to complement this with additional taught modules. Students who love human biology but do not share the same enthusiasm for practical research will, therefore, still find their niche in this programme.

Learning Outcomes

Upon successful completion of the programme you are expected to be able to:

- Demonstrate excellent independent critical thinking and knowledge of biomedical sciences;
- Identify critical health problems facing humanity in the 21st century and demonstrate awareness of how these are being, or can be, tackled;
- Generate a biomedical scientific hypothesis that is inherently falsifiable and which can, therefore, be experimentally challenged;
- Experimentally evaluate a hypothesis in a professional and competent manner by performing experiments in a systematic manner, with appropriate negative and positive controls, whilst adhering to good lab practice and observing Health & Safety guidelines;
- Critically solve problems, including experimental troubleshooting and designing tools to address them;
- Generate thorough records of all research data gathered by maintaining a carefully documented Lab Diary;

- Explain the fundamental principles of molecular biology and integrate them with cellular biology thereby illustrating how homeostasis is maintained in the whole organism;
- Interpret complex data, assimilate it and summarise it in a more manageable format;
- Critique current knowledge within biomedical sciences and demonstrate awareness of 'hot', controversial or not yet well-understood topics and evaluate ways to further knowledge and understanding;
- Demonstrate excellent verbal and written communication and presentation skills;
- Generate a professional curriculum vitae and a credible job application;
- Demonstrate a high level of self-awareness, fair play behaviour at all times and a concern for society.

Students not completing the full BSc degree may be awarded one of the following exit-awards:

Certificate of Higher Education (CertHE): Upon successful completion of year 1 of the programme, you are expected to be better able to:

- Explain the core principles of molecular and cellular biology, and human physiology with respect to the whole organism;
- Acquire, organise and interpret data;
- Identify existing and predicted human health problems;
- Demonstrate a basic knowledge of biomedical science
- Discuss the merits of different scientific approaches;
- Execute core laboratory techniques and document experimental findings;
- Work effectively in a team and demonstrate professional behaviour in all learning environments.

Diploma of Higher Education (DipHE): Upon successful completion of year 2 of the programme, you are expected to be better able to:

- Experimentally evaluate a hypothesis in a professional and competent manner by performing experiments systematically;
- Be able to solve problems, including experimental troubleshooting;
- Generate thorough records of all research data gathered by maintaining a carefully documented Lab Book;
- Appraise specific areas of health and disease, such as cancer biology, immunology, neuroscience, pharmacology and the cardiovascular system;
- Explain the fundamental principles of genetics and integrate them with molecular and cellular biology;
- Critique current knowledge within biomedical sciences;
- Demonstrate awareness of current, controversial or not yet well-understood topics and evaluate ways to further knowledge and understanding;
- Communicate scientific matters effectively;
- Work both independently and as part of a team.

The Imperial Graduate Attributes are a set of core competencies which we expect students to achieve through completion of any Imperial College London degree programme. The Graduate Attributes are available at: www.imperial.ac.uk/about/education/our-graduates/

Entry Requirements	
Academic Requirement	A Levels: Minimum entry standard **AAA** overall. **A** in Biology or Human Biology **A** in Chemistry, Mathematics, Further Mathematics or Physics Where applicants are studying Mathematics or Further Mathematics, the third subject must be in a non-Mathematics subject. **Pass** in the practical science assessment for all science subjects which form part of the offer. General Studies and Critical Thinking may be taken but are not accepted as part of the offer.

	International Baccalaureate (IB): Minimum entry standard Minimum 38 overall with 6 in Biology at a high level and 6 in Chemistry, Mathematics or Physics at a higher level. For further information on entry requirements, please go to UG: www.imperial.ac.uk/study/apply/undergraduate/entry-requirements/
English Language Requirement	Higher requirement (UG) Please check for other Accepted English Qualifications
Admissions Test/Interview	N/A

The programme's competency standards documents are available from the department.

Learning & Teaching Approach

Learning and Teaching Delivery Methods

- Interactive sessions
- Flipped lectures
- Team-based learning
- Tutorials
- Seminars
- Laboratory demonstrations and experiments
- Practical classes and field work
- Guest lectures
- Lectures
- Presentations

E-learning & Blended Learning Methods

- Virtual Learning Environment (VLE)
- Online materials
- Online voting systems
- Online discussion forums
- Interactive content including video and quizzes

Project and Placement Learning Methods

- Final year project
  - Work placement project
  - Laboratory project
  - Literature project

Overall Workload

Your overall workload consists of face-to-face sessions and independent learning. Medical Biosciences is an intensive programme and you can normally expect to have timetabled teaching from 0800 to 1800 Monday to Friday, except for Wednesday afternoons which are kept free for extracurricular activities.

At Imperial, each ECTS credit taken equates to an expected total study time of 25 hours, therefore, the expected total study time will vary depending on the modules you take, especially in years 2 and 3 where you have optional modules. Typically, in the first two years you can expect to spend approximately 20% of your time on in person learning sessions, seminars, tutorials (around 300 hours) and approximately 80% of your time on independent study.

Assessment Strategy

Assessment Methods

Assessment will use a range of methods:

- Written exams
- Digital storytelling

- Poster presentation
- Oral presentation
- Model prediction
- Data analysis report
- Written assessment/critique
- Blog posts
- Laboratory Practical write-up
- Experimental planning
- Lab books
- Practical exam
- Experiment write-up
- Creative writing
- Data handling
- TBL-based assessments
- Group reports
- Peer assessment of group reports
- Lab work
- Research preparation plan
- Scientific paper
- Dissertation, plus dissertation preparation plan
- Placement report
- Business case
- Online tests
- Essays
- Continuous assessments
- Reports

The assessments are designed to probe different types of skills and are scaffolded in a way to prepare you for the 'real world'. Thus, we use authentic methods, such as poster or oral presentations, that help you to summarise scientific information for presentation to different types of audiences, including other scientists, lay audiences or commercial entities. Other methods, such as data handling and summarising scientific findings in various reports enable you to learn independent thinking and critical analysis of scientific data and the published literature. You will also learn to create a scientific hypothesis and how to test it, which will be assessed in lab books and experimental planning scenarios. The lab books are also used to demonstrate your ability to accurately record research data. Your ability to solve problems and carry out experiments will be tested in practical exams. Finally, the Year 3 project work is summarised in a report, enabling you to demonstrate your ability to assimilate and summarise scientific data, evaluate it and place it into context of the wider literature.

Formative assessments will primarily be available in the first Year 1, to enable you to understand the different types of assessments on the programme.

In Year 1, all theoretical modules are summatively assessed by a written exam (50% module weighting) and in-course work that includes data handling (30% module weighting), data analysis report (50% module weighting), written assessment/critique (50% module weighting), oral presentation (20% module weighting), digital storytelling (25% module weighting) and practical write-up (25% module weighting). The Lab Pod module is assessed by a practical exam (33% module weighting), a lab book (33% module weighting) and an oral presentation (33% module weighting).

In Year 2, all theoretical modules are summatively assessed by a written exam (60% module weighting and in-course work that makes up the remaining 40% of the module marks). The in-course assessments include digital storytelling, oral presentation, written assessment/critique and group research proposal. The Lab Pod module is assessed by a written exam (50% of module weighting) and an experiment write-up.

In Year 3, you will take one of three pathways. Students on all three pathways are summatively assessed on their projects by an oral presentation (25% module weighting) and a project report (75% module weighting). Students on the Literature-Based Project pathway and the Work Placement-Based Project pathway are taking additional modules that are assessed by an oral presentation or equivalent (online post) (40% Creative Reflection module weighting), and written coursework or equivalent (reflective portfolio) (60% Creative Reflection module weighting); and by an analytical essay (50% Science Communication and Public Engagement module weighting), an in-genre written assessment (20% Science Communication and Public Engagement module weighting) and

digital storytelling (30% Science Communication and Public Engagement module weighting). All students additionally take three short modules.

Academic Feedback Policy
Feedback may be provided in one of a number of formats, including: • Oral (e.g. face to face during or after sessions, or by video) • Personal (e.g. discussion with academics during office hours) • Interactive (e.g. TBL, peer-to-peer, online quizzes) • Written (e.g. solutions, model answers, feedback on student submissions) Feedback will be provided on coursework and practical assessments within 2-3 weeks of submission Imperial's Policy on Academic Feedback and guidance on issuing provisional marks to students is available at: www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/
Re-sit Policy
Imperial's Policy on Re-sits is available at: www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/
Mitigating Circumstances Policy
Imperial's Policy on Mitigating Circumstances is available at: www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/

Additional Programme Costs		
This section should outline any additional costs relevant to this programme which are not included in students' tuition fees.		
Description	Mandatory/Optional	Approximate cost
Commuting to companies, if external work-based project is selected.	Optional	Variable

Important notice: The Programme Specifications are the result of a large curriculum and pedagogy reform implemented by the Department and supported by the Learning and Teaching Strategy of Imperial College London. The modules, structure and assessments presented in this Programme Specification are correct at time of publication but might change as a result of student and staff feedback and the introduction of new or innovative approaches to teaching and learning. You will be consulted and notified in a timely manner of any changes to this document.

Programme Structure[1]

Year 1 – FHEQ Level 4
You will study all core modules.

Code	Module Title	Core/ Elective/ Compulsory	Group	Term	Credits
MEDI40008	Molecular and Cellular Biology	Core		Autumn-Summer	15
MEDI40009	Chemistry of Biological Interactions	Core		Autumn	7.5
MEDI40010	Integrative Body Systems	Core		Spring-Summer	15
MEDI40011	Statistics	Core		Autumn	7.5
MEDI40012	Lab Pod I	Core		Autumn-Summer	15
				Credit Total	60

Year 2 - FHEQ Level 5
You will study all core modules and compulsory modules. You must choose four elective modules in total from groups A and B.

Code	Module Title	Core/ Elective/ Compulsory	Group	Term	Credits
MEDI50015	Genetics and Genomics	Core		Autumn	10
MEDI50017	Lab Pod II	Core		Autumn-Summer	15
	I-Explore	Compulsory			5
MEDI50020	Microbiome in Health and Disease	Elective	A	Autumn	7.5
MEDI50022	Pharmacology and Toxicology	Elective	A	Autumn	7.5
MEDI50023	Stem Cells and Reproductive Biology	Elective	A	Autumn	7.5
MEDI50016	Cancer Biology	Elective	B	Spring	7.5
MEDI50012	Cardiovascular and Thoracic Biology	Elective	B	Autumn	7.5
MEDI50018	Immunology and Inflammation	Elective	B	Spring	7.5
MEDI50019	Neuroscience	Elective	B	Spring-Summer	7.5
				Credit Total	60

[1] **Core** modules are those which serve a fundamental role within the curriculum, and for which achievement of the credits for that module is essential for the achievement of the target award. Core modules must therefore be taken and passed in order to achieve that named award. **Compulsory** modules are those which are designated as necessary to be taken as part of the programme syllabus. Compulsory modules can be compensated. **Elective** modules are those which are in the same subject area as the field of study and are offered to students in order to offer an element of choice in the curriculum and from which students are able to select. Elective modules can be compensated.

Year 3 - FHEQ Level 6
You will choose either the Laboratory Based Research Project and ONE module each from groups C, D and E OR study 'Science Communication and Public Engagement (10 ECTS)', 'Creative Reflection on Professional Practice', choose ONE module from group F, and ONE module each from groups C, D and E.

Code	Module Title	Core/ Elective/ Compulsory	Group	Term	Credits
MEDI60028	Laboratory Based Research Project	Elective		Autumn-Spring	45
MEDI60036	Designing Drugs for the 21st Century	Elective	C	Summer	5
MEDI60029	Precision Medicine	Elective	C	Summer	5
MEDI60034	Regenerative Medicine	Elective	C	Summer	5
MEDI60044	Innovation and Translation in Medicine	Elective	C	Summer	5
MEDI60037	Global Health	Elective	D	Summer	5
MEDI60038	Science Communication and Public Engagement	Elective	D	Summer	5
MEDI60042	Biomedical Data Science	Elective	D	Summer	5
MEDI60043	Ethics and Medical Regulation	Elective	D	Summer	5
MEDI60032	Biology of Ageing	Elective	E	Summer	5
MEDI60031	Obesity and Diabetes	Elective	E	Summer	5
MEDI60035	Nanobiology and Biomaterials	Elective	E	Summer	5
MEDI60033	Targeting Antimicrobial Resistance	Elective	E	Summer	5
MEDI60039	Science Communication and Public Engagement - Advanced	Elective		Spring	10
MEDI60030	Creative Reflection on Professional Practice	Elective		Spring	5
MEDI60040	Literature Based Research Project	Elective	F	Autumn-Spring	30
MEDI60041	Work Placement Based Project	Elective	F	Autumn-Spring	30
				Credit Total	60

Progression and Classification

Progression

In order to progress to the next level of study, you must have passed all modules (equivalent to 60 ECTS) in the current level of study at first attempt, at resit or by a compensated pass.

The overall weighted average for each year must be 40.00% or above, including where a module(s) has been compensated, in order for you to progress to the next year of the programme.

Classification

The marks from modules in each year contribute towards the final degree classification.

In order to be considered for an award, you must have achieved the minimum number of credits at the required levels prescribed for that award and met any programme specific requirements as set out in the Programme Specification.

Your classification will be determined through:

i) Aggregate Module marks for all modules
ii) Year Weightings

This is known as the Programme Overall Weighted Average.

For this award, Year One is weighted at 7.50%, Year Two at 35.00% and Year Three at 57.50%.

The university sets the class of undergraduate degree that may be awarded as follows:

i)	First	70.00% or above for the average weighted module results
ii)	Upper Second	60.00% or above for the average weighted module results
iii)	Lower Second	50.00% or above for the average weighted module results
iv)	Third	40.00% or above for the average weighted module results

Programme Specific Regulations

N/A

Supporting Information
The Programme Handbook is available from the department.
The Module Handbook is available from the department.
Imperial's entry requirements for undergraduate programmes can be found at: http://www.imperial.ac.uk/study/ug/apply/requirements
Imperial's Quality & Enhancement Framework is available at: www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance
Imperial's Academic and Examination Regulations can be found at: www.imperial.ac.uk/about/governance/academic-governance/regulations
Imperial College London is an independent corporation whose legal status derives from a Royal Charter granted under Letters Patent in 1907. In 2007 a Supplemental Charter and Statutes was granted by HM Queen Elizabeth II. This Supplemental Charter, which came into force on the date of Imperial's Centenary, 8th July 2007, established Imperial as a University with the name and style of "The Imperial College of Science, Technology and Medicine". www.imperial.ac.uk/admin-services/secretariat/university-governance-structure/charters/
Imperial College London is regulated by the Office for Students (OfS) www.officeforstudents.org.uk/advice-and-guidance/the-register/
This document provides a definitive record of the main features of the programme and the learning outcomes that you may reasonably be expected to achieve and demonstrate if you take full advantage of the learning opportunities provided. This programme specification is primarily intended as a reference point for prospective and current students, academic and support staff involved in delivering the programme and enabling student development and achievement, for its assessment by internal and external examiners, and in subsequent monitoring and review.