

Programme Information		
Programme Title	Programme Code	HECoS Code
Medical Biosciences with Management	B111	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
BSc	4 Calendar Years	Full Time	Annually in October	240	480

You must apply to the BSc.

Ownership			
Awarding Institution	Imperial College London	Faculty	Faculty of Medicine
Teaching Institution	Imperial College London	Department	School of Medicine
Associateship	Imperial College School of Medicine	Main Location(s) of Study	South Kensington Campus

External Reference	
Relevant QAA Benchmark Statement(s) and/or other external reference points	Honours Degrees in Biomedical Science Honours Degrees in Biosciences Business and Management
FHEQ Level	Level 6
EHEA Level	1st Cycle

External Accreditor(s) (if applicable)			
External Accreditor 1:	EQUIS		
Accreditation received:	2006	Accreditation renewal:	2025
External Accreditor 2:	AACSB International		
Accreditation received:	2012	Accreditation renewal:	2028

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

	Ms Veronica Russell, Director, Education Quality (Business School)
Student cohorts covered by specification	2024-25 entry
Date of introduction of programme	October 17
Date of programme specification/revision	September 24

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 option 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, including Imperial Horizons module(s). Students who love human biology but do not share the same enthusiasm for practical research will, therefore, still find their niche in this programme.

“With Management” Year

Imperial College Business School offers an undergraduate ‘with Management’ programme with the Departments of Medical Biosciences, Biochemistry, Biology and Chemistry. Students from these departments usually devote their final year of study to management subjects. The objective of this pathway is to equip future managers and leaders with an understanding of the management and operating environments of different organisations and to provide them with some basic management skills and tools. Some of the compulsory modules are taught with students on the Intercalated BSc from the Faculty of Medicine. Teaching is based on lectures, seminars, tutorials and case studies. The lecturers responsible determine teaching methods for each module. The majority of subjects are assessed on the basis of a final examination and coursework (excluding the group project which is assessed by presentation and report).

The programme is divided into three terms – term one and two include compulsory modules that are focused on introducing general management and business ideas, including topics on Organisational Behaviour, Human Resource Management, Accounting, Global Strategy, Marketing, Entrepreneurship, and Sustainable Business practices. Term one and two also include modules that are designed specifically for the ‘with Management’ students to understand all facets of leading and managing in today’s world. These modules include Business Economics, Finance and Financial Management, and Innovation Management.

Term three will be spent undertaking a large group project addressing a current business and management challenge. Some preparatory work for the project will be undertaken in the first two terms – particularly developing the necessary research skills required to complete the project successfully. The projects aim at allowing students to apply learning from their taught modules to real-world challenges and provide recommendations to address such challenges. Groups will be required to produce a presentation and report of some significant length as part of this final project.

Examinations will be scheduled at the start of term two and term three.

Before you start the programme, you are given access to on-line interactive primers in Maths, Accounting and Study Skills to prepare you for your compulsory module content. These modules are non-assessed, but you are strongly encouraged to complete them.

You are required to complete the Plagiarism Awareness primer as part of your programme.

The Programme starts with a comprehensive induction week which includes a number of sessions supporting your transition to a new field of study: e.g. Fundamentals of Business; Working with Case Studies; Teamwork and Presentation Skills. The week also includes non-assessed activities designed to allow you to practice newly acquired skills and receive formative feedback and provides you with plenty of networking opportunities so you can quickly and effectively embed in the new community.

Exam preparation sessions are offered later in term, as well as sessions with the library team regarding the resources available.

Learning Outcomes

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

Medical Biosciences:

- 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.

Management:

The programme provides opportunities for undergraduate students to develop and demonstrate knowledge, skills and other attributes in the following areas.

Upon successful completion of the Programme, you will be able to:

- Evidence a foundation of knowledge in core business disciplines
- Apply this knowledge to a real-world problems
- Demonstrate advanced transferable skills in team work and delivering complex information concisely in different formats.

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	<p>Minimum AAA overall</p> <p>A in Biology or Human Biology A in Chemistry, Mathematics, Further Mathematics or Physics</p> <p>Where applicants are offering an A grade in Mathematics or Further Mathematics, the third A grade must be in a non-Mathematics subject.</p> <p>Pass in the practical science assessment for all science subjects which form part of the offer</p> <p>General Studies Critical Thinking</p> <p>Where applicants are offering an A grade in Mathematics or Further Mathematics, the third A grade must be in a non-Mathematics subject.</p> <p>Minimum 38 overall</p> <p>6 in Biology at higher level 6 in Chemistry, Mathematics or Physics at higher level</p> <p>For further information on entry requirements, please go to www.imperial.ac.uk/study/apply/undergraduate/entry-requirements/</p>
Non-academic Requirements	N/A
English Language Requirement	<p>Higher requirement Please check for other Accepted English Qualifications</p>
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
- Workshops
- Case studies
- Group work exercises
- 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:

- Third year project
- Work placement
- Supervised group 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. The expected total study time is 1,500 hours for the “with Management” year.

Assessment Strategy**Assessment Methods**

Assessment will use a range of methods:

- Written exams
- Digital storytelling
- Poster presentation
- Oral presentation
- Data analysis report
- Written assessment/critique
- 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 a reflective portfolio (40% Oral Presentation or equivalent (online post)), 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 that are each assessed by an oral presentation (50% module weighting) and data handling (50% module weighting).

Year 4 assessments will be comprised of:

- Essays
- Continuous assessments
- Written Examinations/Tests

- Multiple Choice Tests
- Formal Presentations
- Reports
- Case Studies
- Participation
- Digital content

Programme Component	ECTS	% Weighting
9 x Compulsory modules	45	75%
1 x Group Project	15	25%
		100%

Academic Feedback Policy

School of Medicine:

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

Business School:

Feedback can take many forms. During lectures and classes, you will receive verbal feedback on the ideas that you contribute to discussions and on in-class presentations. The online teaching materials contain exercises with built-in, immediate, feedback that is received when you submit an answer.

The School aims to provide feedback on coursework within two weeks. This will be sent in written form to the individual or group, as appropriate. Academic staff may also provide verbal feedback of a general nature in class or posted to our virtual learning environment. Office hours offered on all modules also provide an opportunity for individual feedback.

The School aims to provide provisional examination grades twenty-five days from the end of the examination period. General feedback to the cohort is provided on examination performance, usually in written form. If you need to resit an examination you may also approach the module leader for feedback on your performance in the first sitting.

You will be provided with a percentage grade for coursework and examinations with the final numerical mark only confirmed after the Board of Examiners Meeting and then released by Registry. Grades received during the year are deemed provisional until confirmed by the Final Board of Examiners.

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	£25 per week

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 Structure¹					
Year 1 – FHEQ Level 4					
You will study all core modules.					
Code	Module Title	Core/ Compulsory/ Elective	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 compulsory modules and choose four electives in total from Group A and B.					
Code	Module Title	Core/ Compulsory/ Elective	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 & 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' and choose ONE module each from groups C, D and E.					
Code	Module Title	Core/ Compulsory/ Elective	Group	Term	Credits
MEDI60028	Laboratory Based Research Project	Elective		Autumn-Spring	45
MEDI60036	Designing Drugs for the 21 st 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		Autumn-Spring	30
MEDI60041	Work Placement Based Project	Elective		Autumn-Spring	30
Credit Total					60
Year 4 - FHEQ Level 6					
You will study all compulsory modules.					
Code	Module Title	Core/ Compulsory/ Elective	Group	Term	Credits
BUSI97178	Plagiarism Awareness	Compulsory		AU	0
BUSI60023	Accounting	Compulsory		AU	5

BUSI60033	Business Economics	Compulsory		AU	5
BUSI60025	Global Strategy	Compulsory		AU	5
BUSI60026	Organisational Behaviour and Human Resource Management	Compulsory		AU	5
BUSI60028	Marketing	Compulsory		SP	5
BUSI60034	Innovation Management	Compulsory		SP	5
BUSI60035	Finance and Financial Management	Compulsory		SP	5
BUSI60027	Sustainable Business	Compulsory		SP	5
BUSI60031	Entrepreneurship	Compulsory		SP	5
BUSI60032	Research Methods and Practice	Compulsory		AU/SP/S U	15
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 20.00%, Year Three at 36.25% and Year Four at 36.25%.

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 postgraduate programmes can be found at:
www.imperial.ac.uk/study/pg/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

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www.imperial.ac.uk/admin-services/secretariat/college-governance/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.