Imperial College London

School of Medicine MBBS Curriculum Review

Update – Spring Term 2019

The curriculum redesign is progressing well with Phase One set to commence in Year One in Autumn 2019. A working group is focussing specifically on week one and week two to ensure a smooth transition to the new curriculum. A significant Curriculum Review project milestone was achieved last month as Programme Specifications (at the end of this update) and Phase One and Phase Three Module Specifications successfully passed through College Programmes Committee. The approvals for Module Intended Learning Outcomes (MILOs), module content, learning and teaching approach and the assessment strategy means we are now in a position to develop the detailed content for Phase One.

The FEO's timetabling team is working hard to schedule the new curriculum, and map out cross cutting themes throughout the year. Meanwhile Module and Domain Leads are collectively developing aspects of the patient facing modules to determine week by week teaching content and methods of assessment including clinical learning encounters and reflections (CLEARs), Directly Observed Clinical Skills (DOCs) and community survey projects.

Content is being detailed for the crosscutting Cases module, led by Dr Chris John and Dr Omar Usmani, by developing the individual cases and their associated pre- and post-session teaching material that students will study throughout their case based learning in Phase One. In some instances, the students will revisit the same patient case with a different clinical issue designed to complement other aspects of the learning in Phase 1:

> *The Cases module aims to start to prepare students for clinical practice, through the use of authentic clinical cases. The module will link theory to practice through the application of professional values and behaviours; knowledge and skills, which will be incorporated into the cases, using inquiry based learning methods. The module is organised to develop clinical reasoning skills, underpinned by scientific knowledge and supported by evidence-based research.*

Other areas of focus include an exercise led by Dr Keith Gould to collaborate with Module Leads to establish Topic Level Learning Outcomes (TILOs), which are being mapped to the now approved MILOs. The TILOs can be tagged with one or more of our ten curriculum domains, one or more of the GMC domains – Professional Values and Behaviour, Professional Skills, Professional Knowledge – or any of the GMC's Outcomes for Graduates.

Module and Domain Development Leads are also collaborating with the Digital Learning Hub on a number of ongoing projects to develop material for the Cases and the Lifestyle Medicine & Prevention modules; and for the Research Skills and the Anatomy & Diagnostics domains:

> *This collaboration will support the integration of digital elements throughout the curriculum. The School of Medicine is now investing in new teaching materials to fulfil its blended learning strategy and the result will be major changes in medical students' experience of learning over the next few years.*

Digital content is also at the forefront of a redesign of Week One and Two, with work packages being undertaken to implement a digital platform for new students which will include an interactive induction programme and course guide. The aim is to equip students with the knowledge and required primer tasks before arrival, making the week one and two activities more streamlined by introducing the Faculty and Academic Tutors, communicating study skills and explaining assessment.

Dr Jo Harris

The Curriculum Review team is always happy to hear views and comments via the curriculumreview@imperial.ac.uk mailbox.

Imperial College London

Programme Specification

For good practice guidance in completing this document, please refer to *'Information for Students: guide to providing information to prospective undergraduate students'* (QAA).

Programme Information		
Programme Title	Programme Code	HECoS Code
Medicine	For Registry Use Only	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
BSc MBBS	6 academic years	Full-time	Annually in October	405	800

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 (AICSM)	Main Location(s) of Study	South Kensington Campus and Charing Cross Campus

External Reference		
Relevant QAA Benchmark Statement(s) and/or other external reference points		QAA Benchmark Statement: Degrees in Medicine General Medical Council: Outcomes for Graduates
FHEQ Level	BSc	Level 6
	MBBS	Level 7
EHEA Level	BSc	1st Cycle
	MBBS	2nd Cycle

External Accreditor(s) (if applicable)			
External Accreditor:	General Medical Council		
Accreditation received:		Accreditation renewal:	YYYY

Collaborative Provision			
Collaborative partner	Collaboration type	Agreement effective date	Agreement expiry date

Specification Details

Programme Lead	Mr Martin Lupton
Student cohorts covered by specification	2019-20 entry
Date of introduction of programme	October 19
Date of programme specification/revision	September 18

Programme Overview

The Faculty of Medicine at Imperial College London is among the largest in Europe, with a wide range of partners including GP practices, and hospital and mental health trusts, both inside and outside of London.

This programme is delivered through a range of teaching methods, including small group teaching, team-based learning, interactive lectures, technology-enhanced learning, laboratory and clinical skills classes and case-based learning. You gain clinical experience early in your degree, giving you direct contact with the diverse local patient population and enabling you to apply skills learnt in the classroom at an early stage.

The curriculum of this course reflects the values of the NHS Constitution: "Working together for patients, respect and dignity, everyone counts, commitment to quality of care, compassion and improving lives". Further research of NHS Values, the NHS Constitution and how you might organise some relevant work experience are essential to making a strong application to this programme.

At Imperial, your studies will emphasise the integration of scientific knowledge and research methods with safe, effective and compassionate patient care. The intention is that the Imperial graduate will be able to practise evidence-based Medicine in any setting.

Those who successfully complete the programme will graduate with:

- Bachelor of Science (BSc)
- Bachelor of Medicine and Bachelor of Surgery (MBBS)

The curriculum is structured into three phases and is delivered as a matrix of modules and domains. Modules are topics taught in discrete periods of time and domains are overarching themes that weave through the programme and are delivered through the modules.

The first phase (years 1 to 3) focuses on the integration of science and clinical knowledge and skills, while ensuring that you build the values and behaviours needed to practise medicine. You will focus on your communication, and topics such as uncertainly and resilience. Phase 2 (Year 4) allows you to build on research skills developed in Phase 1 through one of a range of pathways. At the end of Phase 2, you will graduate with a BSc, and the award title will reflect your pathway option. Phase 3 (years 5 and 6) centres on preparation for practice as a Foundation Doctor in the NHS, with a range of clinical placements in primary and secondary care settings. Towards the end of the programme following final examinations, there is a period of longitudinal apprenticeship, during which you will be embedded in a clinical team. The programme ends with an elective period, where students organise their own extended placement, either in the UK or abroad.

The programme is accredited by the General Medical Council (GMC) and has been carefully aligned with the GMC's *Outcomes for Graduates* (2018). The programme leads to a primary medical qualification, one of the requirements to practise as a doctor. The General Medical Council (GMC) is introducing a Medical Licensing Assessment – the MLA - from 2022 to demonstrate that those who obtain registration with a licence to practise medicine in the UK meet a common threshold for safe practice. Applicants should be aware that to obtain registration with a licence to practise, medical students will need to pass both parts of the MLA, obtain the primary medical qualification and demonstrate their fitness to practise.

Learning Outcomes

These Programme Intended Learning Outcomes are derived from GMC Outcomes for Graduates (2018) and use the same broad domains from that document. They additionally reflect the intercalated BSc in the Imperial MBBS programme and ensure that our curriculum is fully aligned with the Imperial Learning and Teaching Strategy (2017).

At the end of this programme you will be able to:

Professional values and behaviours

1. Demonstrate the professional values, behaviours and responsibilities of a doctor, putting the patient at the centre of all decision-making.
2. Apply ethical and legal principles to patient care and scientific research.
3. Apply the concepts of quality improvement, patient safety and safeguarding to clinical care.
4. Demonstrate intellectual curiosity, managing uncertainty and ambiguity, and recognise and evaluate complexity in both clinical and research settings.
5. Effectively participate in multidisciplinary teams and demonstrate leadership skills where appropriate, recognising the boundaries of own competency.
6. Demonstrate self-awareness and reflective practice and develop the skills and strategies to support own studies and wellbeing.
7. Demonstrate commitment to lifelong learning and evidence-based practice, supporting others in their learning.

Professional skills

8. Communicate effectively, openly and sensitively, with due regard for confidentiality, through a range of media in clinical and scientific settings.
9. Describe and apply the pathophysiology of common diseases to clinical diagnosis and management.
10. Elicit patient-centred case histories and carry out appropriate physical and mental state examinations and procedural skills safely and sensitively.
11. Synthesise the findings from history, examination and investigations to propose a diagnosis and develop a shared management plan for common acute, chronic and urgent physical and mental health presentations.
12. Explain the pharmacology of common medications and apply this knowledge to the management of patients as safe, competent prescribers who recognise the causes and consequences of prescribing errors.
13. Explain the process of translation of scientific discovery to the clinical setting and the application of a scientific approach to patient care.

Professional knowledge

14. Explain the NHS model of healthcare in the United Kingdom, including patient pathways.
15. Describe the normal human structure, function and development at all stages of life, including the mechanisms responsible for homeostasis.
16. Apply key biopsychosocial theories to illness, disability and disease, and describe how these impact on health outcomes and patient care.
17. Consider the impact of social context on a patient's health and apply the principles of population health to the prevention of illness and the promotion of health.
18. Apply knowledge of the research pathway and a range of research skills to critically appraise the work of others and to design and implement effective studies.

The Imperial Graduate Attributes are a set of core competencies which we expect students to achieve through completion of any Imperial College degree programme. The Graduate Attributes are available at: www.imperial.ac.uk/students/academic-support/graduate-attributes

Entry Requirements

Academic Requirement	A Levels: Minimum entry standard **AAA** overall To include: **A** in Chemistry **A** in Biology **A** in a third 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 Chemistry and **6** in Biology. GCSE requirements: None.
English Language Requirement	Higher requirement IELTS score of 7.0 overall (minimum 6.5 in all elements).
Admissions Test/Interview	All candidates applying to this course must take the BioMedical Admissions Test (BMAT) in the year of application in order to be considered for interview. Invitations to an interview will be based on: • the content of your UCAS application • your performance in all three sections of BMAT If selected, you will be required to attend an interview. Further details about the interviews can be found on our admissions website.
The programme's competency standards documents can be found at: [insert link here]	

Learning & Teaching Approach

Learning and Teaching Delivery Methods

Years 1 and 2 of Phase 1 are primarily delivered through a mixture of interactive large group and small group teaching. You will have preparatory work to undertake online before attending face to face teaching, in a model known as the 'flipped classroom' approach. The large group teaching includes interactive lectures, team-based learning and skill-based learning, with clinical skills and scientific practicals. The small group teaching will involve tutorials, clinical skills and scientific practicals and situational learning such as clinical placements. This teaching will cover content related to the modules of Phase 1 and the programme domains. A proportion of the teaching will be delivered by case studies that will enable you to integrate your knowledge of the scientific and clinical elements from different modules and domains. There will also be simulation designed to prepare you for clinical placements.

In Years 1 and 2, patient contact will be delivered through the Patients, Communities and Healthcare modules. There will be opportunities to see patients in their homes, in general practices and in hospital settings, and to interact with community health providers. In Year 3, you will have extended clinical placements. Medicine and Surgery will be hospital-based and Medicine in the Community will be based in primary care. There will also be two weeks of campus-based teaching at the end of each module to consolidate learning from the clinical placement.

In Phase 2 (Year 4) you will select a BSc pathway. Module 1 of your pathway will comprise 3 three-week teaching block with a consolidation week after each block. Module 2 will involve group work to produce a literature review and in Module 3 you will work independently on a research project. Under certain circumstances, it may be possible to undertake an intercalated BSc at another UK university.

In Phase 3 (years 5 and 6), you will have clinical placements based in the hospital and community in clinical specialties, medicine and surgery. These placements are designed to integrate your clinical knowledge and prepare you for practice as a Foundation Doctor. In addition to being embedded in clinical teams, a range of structured teaching and simulation sessions will be provided to give you experience of unfamiliar situations, manage uncertainty and to enable you to practise making decisions. You will have frequent contact with a general practitioner as an educational supervisor throughout Phase 3 to facilitate integrating your knowledge and skills. You will also have an opportunity to select modules for specialty choice placements during Phase 3.

After Year 6 examinations and the Medical Licensing Assessment there will be an extended period of longitudinal clinical apprenticeship where you will be based at one site and spend time shadowing Foundation Doctors to prepare for practice after graduation. This will include further educational supervision and the opportunity to select a module in an area of particular interest. The programme will end with an extended elective period where you design a programme tailored to your own particular interests. Most students choose

to spend this period in a placement abroad. The longitudinal clinical apprenticeship and the elective will be assessed by portfolio and must be completed to a satisfactory standard in order to obtain the final award.

Overall Workload
Your overall workload consists of face-to-face sessions and independent learning. Medicine is an intensive programme and you can normally expect to have timetabled teaching from 9 am to 5pm Monday to Friday except for Wednesday afternoon, which is kept free for extracurricular activities. There will however be time for consolidation, preparatory work and independent learning built into the programme.

At Imperial, each ECTS credit taken equates to an expected total study time of 25 hours. Each Year of the programme will amount to 60-80 credits. The credits are notional as typically an MBBS degree is not credit rated. They have been applied to give an idea of the volume of workload and hours of study per module.

Assessment Strategy

Assessment Methods

The programme employs an approach to assessment known as 'programmatic assessment'. This is a centrally managed assessment strategy, intended to support your learning throughout the programme. You will receive regular information-rich feedback from Tutors to foster self-directed learning behaviour. We use a variety of assessment data points as each module progresses. This comprises a number of instruments for assessment, including written examinations, practical examinations and a series of Workplace Based Assessments (WBA) – assessments of clinical skills or practical procedures undertaken *in situ* in the clinical context by a healthcare professional.

You will receive regular feedback on your performance via a Tutor. This will help you to reflect on your learning and make appropriate adjustments if necessary.

At the end of each year, we will review your assessment data and make a decision on your readiness to progress into the next year of the programme.

Phase 1
During Phase 1, there will be a number of **formative** and **summative** assessments of knowledge and practical skills. The formative assessments are designed to help you understand how you are progressing with your learning and you will be able to discuss these with your Tutor. The full range of assessments will include:-

- Single best answer questions (SBAQs) and very short answers questions (VSAQs) which will take place in class
- Short answer questions (SAQs) facilitating a more in-depth understanding of key topics. These will be self-assessed against model answers and also discussed with the Tutors.
- Assessment of both individual and group module components. Multiple data points are aggregated.
- Collaborative projects to promote team working skills.
- Clinical skills will be assessed from Year 1 – you will be assessed on patient encounters in a form of workplace based assessments (WBA) from your first clinical placement. In each year of phase 1, you will have a clinical skills exam (CSE) with the first one being a formative.
- Summative knowledge assessments: There will be summative assessments containing a range of item formats including SBAQs, VSAQs and/or SAQs. There will also be a spotter test for anatomy and diagnostics in both years 1 and 2.

Phase 2
The emphasis in Phase 2 is on acquiring generic transferable research skills rather than in-depth knowledge of your chosen pathway. There will be an emphasis on developing team work skills and writing skills required to present research for publication in the future.

Written assessments will include:

- Project write-up
- Review articles
- Clinical case study
- Scientific Abstracts
- Lay communications/ press releases
- Digital storytelling
- Report writing

And practical assessments will include:

- Oral presentation of research project and future directions
- Oral presentations or debates of controversial issues; draw appropriate conclusions, and justify a point of view

Phase 3

Phase 3 assessment is currently under review since we are awaiting the outcome of a GMC proposal to introduce a national Medical Licensing Assessment (MLA) in 2022/23. We are also constrained by the requirements to use our assessments to provide rankings for your Foundation Programme applications.
Therefore these assessments may change but are likely to include:

1. A minimum number of workplace based assessments for each placement (module) with one being formally presented to a senior clinician.

2. Mini-clinical skills assessments as formatives.

3.Knowledge papers using SBA/VSA as progress testing

4. SAQ paper that integrates clinical cases and applied knowledge of pathology.

5. The MLA Applied Knowledge test

6. The MLA clinical skills exam

Academic Feedback Policy

Feedback is essential for learning and you will receive feedback on a regular basis throughout the programme to inform you about your learning, with advice about areas where you are performing well and where you can improve if appropriate. We will use the principles of good feedback to provide specific and timely feedback to enable you to build on your knowledge and skills make any changes before the next assessment point.

The style of feedback provided varies depending on the context and will include: formative online self-assessments, formative in-class tests, formative examinations, immediate verbal feedback during clinical teaching and presentations, written clinical encounter forms during clinical placements and marks and domain-based performance indicators in summative exams.

Feedback is provided in line with the College's Policy on Academic Feedback.

The College'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

The College's Policy on Re-sits is available at: www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/

Mitigating Circumstances Policy

The College's Policy on Mitigating Circumstances is available at: www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/

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
Travel – to and from clinical placements Some of these costs are covered by the NHS Bursary in Years 5 and 6.	Mandatory	The price will vary depending on where you live and where your placement is located. A weekly travel card for zones 1-5 costs £58.20 (2018)
Elective – additional costs may be incurred for travel and accommodation, depending on where you decide to go. This may be subsidised under certain circumstances on application.	Optional	Will vary depending on selected destination
Clinical Research and Innovation – Research Experiences	Optional	A range of research experiences are available in London, the wider UK and abroad.
Student exchanges Tokyo Medical and Dental University and McGill	Optional	
Phase 2	Optional	Some Phase 2 pathways will have optional additional costs – please see relevant module specifications.

Programme Structure

Year 1 – FHEQ Level 4
Students study all core modules.

Code	Module Title	Core/ Elective	Group*	Term	Credits
	Principles of Medicine	C		1	10
	Systems I	C		1-2	20
	Clinical Science Integration Cases I	C		1-2-3	10
	Patients, Communities and Healthcare I	C		1-2-3	10
	Lifestyle Medicine and Prevention I	C		1-2-3	10
				Credit Total	60

Year 2 - FHEQ Level 5
Students study all core modules.

Code	Module Title	Core/ Elective	Group	Term	Credits
	Systems II	C		1-2	20
	Clinical Science Integration Cases II	C		1-2	10
	Patients, Communities and Healthcare II	C		1-2	10
	Lifestyle Medicine and Prevention II	C		1-2	10
	Clinical Research and Innovation	C		3	10
	Synoptic Clinical Skills Assessment	C		1-3	0
	I-Explore	C		1-3	5
				Credit Total	65

Year 3 - FHEQ Level 5/6
Students study all core modules.

Code	Module Title	Core/ Elective	Group	Term	Credits
	Patients, Communities and Healthcare III	C		1	5
	Phase 1 Medicine	C		1-3	15
	Phase 1 Surgery	C		1-3	15
	Medicine in the Community Apprenticeship	C		1-3	15
	Clinical Science Integration Cases III	C		1-3	10
	Synoptic Clinical Skills and Written Assessment	C		1-3	0
				Credit Total	60

Year 4 - FHEQ Level 6
Students study all core modules. Students study all core modules. Students choose one elective module from Group A and one elective module from Group B. Students may only take Self-directed Learning; Group and independent analyses in Humanities, Philosophy and Law if they have completed Topics in Humanities, Philosophy and Law

Code	Module Title	Core/ Elective	Group	Term	Credits
	Topics in Anaesthesia and Critical Care	E	A	1	25
	Topics in Cancer Frontiers	E	A	1	25
	Topics in Cardiovascular Sciences	E	A	1	25
	Topics in Endocrinology	E	A	1	25
	Topics in Gastroenterology and Hepatology	E	A	1	25
	Topics in Global Health	E	A	1	25
	Topics in Haematology	E	A	1	25
	Topics in Humanities, Philosophy and Law	E	A	1	25
	Topics in Immunity and Infection	E	A	1	25
	Topics in Neurosciences and Mental Health	E	A	1	25
	Topics in Pharmacology	E	A	1	25
	Topics in Remote Medicine	E	A	1	25
	Topics in Reproductive and Developmental Sciences	E	A	1	25
	Topics in Translational Respiratory Medicine	E	A	1	25
	Topics in Surgical Design, Technology and Innovation	E	A	1	25
	Self-directed Learning; Group and Independent Analyses	E	B	2	10
	Self-directed Learning; Group and Independent Analyses in Humanities, Philosophy and Law	E	B	2	10
	Research Project	C		3	25
				Credit Total	60

Year 5 - FHEQ Level 7
Students study all core modules.

Code	Module Title	Core/ Elective	Group	Term	Credits
	Child Health	C			10
	Women's Health	C			10

	Psychiatry	C			10
	The Ageing Patient	C			10
	Surgery and Cancer	C			10
	Medicine	C			10
	General Practice and Primary Healthcare	C			10
	Specialty Choice Module I	C			5
	Clinical Reasoning	C			5
				Credit Total	80

Year 6 - FHEQ Level 7
Students study all core modules.

Code	Module Title	Core/ Elective	Group	Term	Credits
	Acute Care	C			20
	General Practice Student Assistantship	C			10
	Specialty Choice Module II	C			10
	Student Apprenticeship	C			30
	Clinical Elective	C			10
				Credit Total	80

* ‘Group’ refers to module grouping (e.g. a group of electives from which one/two module(s) must be chosen).

Progression and Classification

In order to progress through the MBBS degree and obtain the final award, you must achieve the following:

Phase 1

You must achieve a 'pass' in each module.

In Year 2, you are required to take an I-Explore module. You must satisfactorily attend the I-Explore module and complete all associated assessments but you will not be required to pass the I-Explore module in order to progress or achieve the award.

Phase 2

You must achieve an aggregate mark of at least 40% in each module.

Phase 3

You must achieve a 'pass' in each module.

The MBBS degree is not classified. In order to be considered for the award, you must successfully complete all required modules in Phases 1, 2 and 3.

The BSc is classified as follows:

Third class: a student must achieve an aggregate mark of 40%
Lower Second class: a student must achieve an aggregate mark of 50%
Upper Second class: a student must achieve an aggregate mark of 60%
First class: a student must achieve an aggregate markof 70%

The BSc award is weighted at 100% on Phase 2.

Programme Specific Regulations

Supporting Information
The Programme Handbook is available at: [insert link here]
The Module Handbook is available at: [insert link here]
The College's entry requirements for postgraduate programmes can be found at: www.imperial.ac.uk/study/pg/apply/requirements
The College's Quality & Enhancement Framework is available at: www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance
The College's Academic and Examination Regulations can be found at: www.imperial.ac.uk/about/governance/academic-governance/regulations
Imperial College 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 the College's Centenary, 8th July 2007, established the College as a University with the name and style of "The Imperial College of Science, Technology and Medicine". 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 a typical student may reasonably be expected to achieve and demonstrate if s/he takes 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.

Modifications			
Description	**Approved**	**Date**	**Paper Reference**
e.g. Nature of modification	e.g. Programmes Committee	dd/mm/yy	e.g. PC.2016.120