

## School of Medicine

### Curriculum overview



# University of Liverpool

## School of Medicine MBChB Programme

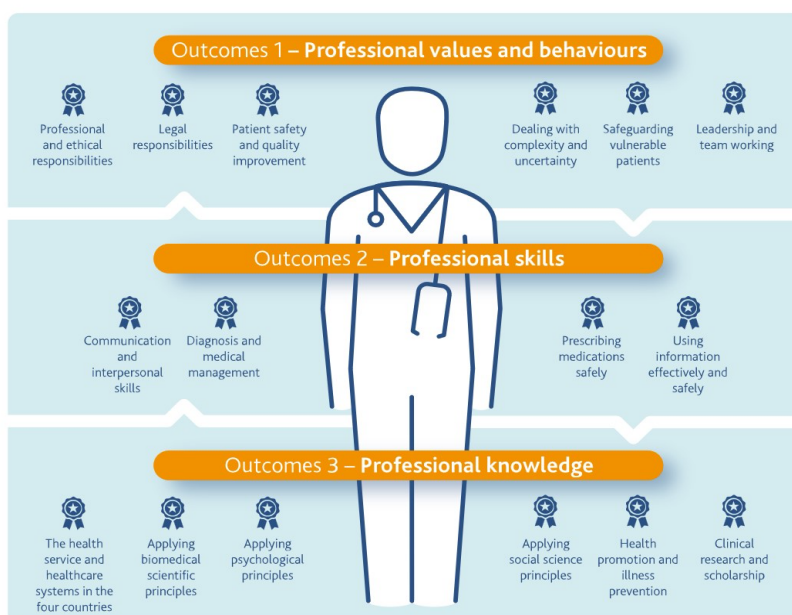
### 1. Overview of the MBChB

The University of Liverpool School of Medicine aspires to create capable, confident and caring doctors equipped to practice in a 21st Century Healthcare Environment.

The MBChB Programme aims to graduate the doctors ready to deliver outstanding patient care in the current and future healthcare system, by developing students who are able to apply a compassionate, evidence-based and patient centred approach to their clinical practice. The MBChB programme aims to actively develop our students’ interest and skill in medical scholarship, to enable their future contribution to new scientific discovery and the development of clinical practice. The programme is underpinned by a vision to harness expertise, from across the University and further afield, in developing our students’ understanding of the potential for 21<sup>st</sup> century medical practice. The educational aims of the MBChB are to:

1. To ensure graduates are able to demonstrate the necessary knowledge, skills and professional behaviours to safely and ethically practice medicine.
2. To ensure graduates are able to meet the core requirements set out by the General Medical Council in “Outcomes for Graduates”.
3. To enable graduates to become lifelong learners committed to their own professional development.

### GMC Structure of Outcomes



Source: Outcomes for Graduates 2018

## 2. MBChB Programme Structure

The MBChB programme is a 5-year, full-time, non-modular programme. All components of the MBChB are mandatory. The curriculum is organised and delivered through a number of suprathermes, under which fall a number of defined themes:

### MBChB Curriculum Supra-Themes and Themes

Supra-Theme	Themes
Science and Scholarship	<ul style="list-style-type: none"> <li>• Science of Medicine</li> <li>• Research and Scholarship</li> <li>• Design and Technology</li> <li>• Personalised Medicine and Genetics</li> </ul>
The Good Doctor	<ul style="list-style-type: none"> <li>• Psychology and Sociology as Applied to Medicine (PSM)</li> <li>• The Clinical Team</li> <li>• Professionalism, ethics and legal context</li> <li>• Public, Preventative and Global Health</li> </ul>
Core Skills	<ul style="list-style-type: none"> <li>• Clinical Examination and procedural skills</li> <li>• Communication for Clinical Practice (CCP)</li> <li>• Therapeutics and prescribing</li> </ul>
Patient in Secondary Care	<ul style="list-style-type: none"> <li>• Acutely Ill Patient</li> <li>• Preparation for Practice</li> </ul>
Patient in the Community Setting	<ul style="list-style-type: none"> <li>• Patient Care Pathways</li> <li>• Disability and Community Care</li> <li>• General Practice</li> </ul>

The curriculum is delivered under a spiral model, under which concepts are introduced at an appropriate level, and revisited with increasing levels of complexity as the course progresses. The structure of the programme can thus be broadly understood as follows:

## MBChB Programme Structure

Year	Course focus
1	Core clinical science: the structure and function of the human body under 'normal' conditions
2	Pathology and disease: 'abnormality and illness' and the interaction with the environment
3	Becoming a practitioner: Core clinical practice
4	Broadening expertise: Specialist and challenging clinical practice
5	Preparing for practice: Emergency and acute clinical medicine

In Years One and Two, all students follow the same lecture timetable, and are also allocated to smaller groups for workshops, seminars and practical skill (clinical skills and anatomy) sessions. All teaching in Year One takes place on the University of Liverpool campus.

Throughout Years Two-Five students undertake clinical placements. Local NHS Trusts, GP practices, hospices, specialist services and community services deliver the placement components of the programme. Each hospital placement takes place at one, or more, of the North West hospital sites. During the course of their studies, students will be expected to rotate through the different clinical providers for variable lengths of time, dependent upon placement block requirements and length. This block rotational model has the added benefit of improving student ability in managing transitions and working across different clinical environments, and preparing them for junior medical postgraduate training. Placement provision is required to meet GMC guidance *Promoting Excellence*, which both the School of Medicine and placement providers are required to evidence they meet.

The programme is accredited by the General Medical Council (GMC). The primary medical qualification entitles the holder to apply to the GMC for registration to practice medicine in the UK.

## Overview of the programme per year

### Years One and Two

In Years One and Two, the emphasis of the programme is on basic and clinical sciences. These are taught using an integrated systems approach. Each system block includes physiology, biochemistry, pathology, microbiology, immunology, pharmacology and anatomy, genetics and cell and molecular biology delivered by lectures, practical and small group sessions and clinical skills sessions (where students will learn how to examine the components of the systems studied, as well as take part in simulation exercises). Communication for

Clinical Practice sessions, in small groups with simulated patients, prepare students for the clinical placements. Students in Year 1 also take part in a unique leadership development course, which is run in collaboration with 208 Field Hospital.

Secondary care placements start in Year Two as an experiential programme, with specific hospitalbased tasks, recorded in their e-portfolio, aimed at integrating them safely into the clinical environment and beginning to apply theoretical knowledge, skills and professional behaviour in clinical practice.

Alongside preparing students for clinical practice, the first 2 years of the programme also introduce students to the foundations of research. The aim of the first two years is to ensure that students have established a core knowledge base, skills and understanding, fit for learning in the clinical environment and their future careers.

### **Years Three and Four**

Years Three and Four have an increasing focus on the application of skills learnt in the first two years of the programme into clinical practice, across a range of core and increasing complex clinical presentations and encounters. Students spend a series of 4-week blocks on clinical placement, where each placement block is preceded by an 'academic' week. This week incorporates approximately 1.5 days of lectures delivered to the whole cohort, and then rotation-specific teaching that will include pre-placement sessions, 1 day of Community Clinical Teaching (Primary Care) that will again be linked to the placement which students are about to attend, clinical skills preparation, simulation sessions and time for student-led Research and Scholarship projects. This 'just in time'<sup>1</sup> approach to teaching, which encourages students to revisit and develop knowledge and skills just before they are needed is designed to ensure that students transition safely into complex NHS settings and clinical disciplines.

These years prepare students to learn to recognise health problems, develop the skills needed to diagnose illness and disease, and manage patients. Students rotate through a variety of integrated hospital and community-based settings in order to complete placements. Students are expected to participate fully in clinical care in these settings, both through timetabled activities and additional opportunities, defined by the School and shared with placement providers. All of these placements provide opportunities to work with clinical teams and care for patients in a variety of healthcare settings.

In Year Three, students gain exposure to the placements that present an understanding of the principles of medicine and surgery, and an introduction to the normal child, the normal pregnancy and primary care, with the focus being on the understanding of core clinical concepts.

### Placements in Years 3

Placement Name	Specialties Covered
Medicine A	Cardiology, Respiratory, Dermatology
Medicine B	Gastroenterology, Diabetes / Endocrine, Infection and Infectious Diseases
Surgery A	Colorectal, Upper GI, Breast, Urology
Surgery B	Trauma & Orthopaedics, Vascular
Paediatrics A	Paediatrics (normal child)
General Practice A	General Practice
Obstetrics and Gynaecology A	Obstetrics and Gynaecology (normal pregnancy)

In Year Four, students are exposed to more specialist and challenging placement experiences including mental health, neurology, more specialised paediatrics and obstetrics and gynaecology, oncology and a nationally-recognised placement of excellence in palliative care.

At the end of Year 4 students are usually expected to undertake a 4-week elective. Many students choose to study abroad during this period. The capacity to do so in 2021-22 remains to be determined

### Placements in Year 4

Placement Name	Specialties Covered
Medicine C	Rheumatology, Renal Medicine and Geriatric Medicine
Surgery C	Ophthalmology, Plastics, Head and Neck (inc ENT)
Neurology	Neurology, Neurosurgery
Psychiatry A	Adult and Learning Disability Psychiatry
Paediatrics B	Paediatrics including Child and Adolescent Mental Health
General Practice B	General Practice
Obstetrics and Gynaecology B	Specialist care, neonatology and sexual health
Medicine D	Palliative Care, Oncology, Haemato-oncology

## Year Five

The final year is spent gaining intensive clinical experience in hospitals and the community to students transition successfully and begin work as a doctor. Students experience Emergency Medicine, Critical Care, Acute Medicine, Acute Surgery, General Practice and Psychiatry placements during this year, and have a ward shadowing experience block towards the end of the year that allows them to consolidate complex clinical skills and professional attributes required of them for their Foundation Year post. Students are also able to undertake a research project such as an audit or Quality Improvement Project, a community based project or a specialist placement of their own choosing. Placement experiences are supported by academic “preparation for practice” weeks, support for the required national examinations and a full week of interprofessional simulation, ensuring students are able to demonstrate the skills need to deliver complex, acute care within a multi-professional team.

## 3. Teaching and Learning

The learning, teaching and assessment strategies of the School of Medicine are aligned to the three Liverpool hallmarks, of research-connected teaching, active learning and authentic assessment.

The curriculum is based on a spiral model, with integration of basic and clinical sciences. The early years of the programme focus on building a strong knowledge foundation and theoretical application of knowledge, along with core clinical skills, while Years Three-Five see students apply that knowledge in clinical practice. Thus concepts introduced in relation to the basic sciences, in the first two years of the curriculum, are revisited at later points with reference to clinical application, medicine, differential diagnoses and patient management. Using this spiral model enables students to develop confidence in the application of scientific knowledge to their clinical practice.

The ethos of learning and teaching within the School is to:

- Provide students with the highest quality learning experience;
- Equip students with the knowledge, skills and behaviours required in professional life;
- Ensure teaching is informed and refreshed by research, current practice and best evidence;
- Ensure staff are encouraged and supported in the development of excellent teaching practice.

The School strives for continuous enhancement and innovative practice in all learning and teaching provision. Robust quality assurance mechanisms are in place to review the quality of all teaching on the programme. A dedicated quality assurance team is responsible for monitoring all taught provision through student evaluation, and for conducting regular placement visits (on a rolling timetable, or on a triggered basis).

The programme is delivered through a range of methods, both on campus and on placement sites.

Didactic teaching is delivered by a range of academic and clinical staff employed both by the University and within our NHS partner sites. Wherever possible, staff researching at the cutting edge of scientific and medical advancement are invited to teach students, to inspire the next generation of clinical academics.

Case-based learning (CBL) is a core component of the course, and used throughout Years One -Five to help students apply knowledge that they have learnt from their own reading, lectures, other didactic content, as well as placement experiences, to apply to case-based discussions relevant to their year of study. CBL is built on the basis of learning through discussion, giving students an opportunity to learn from scenario-based conversations, and to understand that much of medicine is about managing uncertainty and risk, with decisions based upon knowledge of possibilities available at any given time. Each CBL benefits from the guidance of an experienced clinician.

Taught content is developed by teams; each theme has a named lead, and each placement has been designed by a team of clinical specialists. Teaching for all course components is undertaken by teams of academic or clinical specialists as appropriate, with the names leads for the course element responsible for ensuring alignment between set learning outcomes and assessment.

Clinical rotations and the elective give students the opportunity to learn through observation, near peer and consultant-led bedside teaching and through hands-on experience, and to personalise their MBChB experience, ensuring that the University hallmark of 'active-learning' is at the centre of the curriculum

In addition to the above, all students undertaking the MBChB are expected to be self-directed learners; following up taught sessions with appropriate supplementary reading and revision, and consolidating clinical practice opportunities.

#### *E-portfolio*

The e-portfolio enables students to gain evidence of their progression through the course, showing their own personalised path through both mandatory and additional learning experiences. The portfolio gathers together in one place all evidence that in-course assessments have been undertaken, as well as providing opportunities for structured reflection activities on both classroom based learning and placement activities.

## **4. Assessment**

The assessment framework for the MBChB curriculum reflects the key position of assessment at the heart of learning within the programme of study. It is designed to underpin the theoretical principles and practice that shift the balance from assessment-led learning to outcomes based



learning, consistent with the core requirements laid down in the General Medical Council's *Outcomes for Graduates*.

### High stakes assessments with the MBChB

These take one of two formats:

**Integrated:** End of year assessments that constructively align to the full breadth of learning outcomes and course components for the academic year, allowing the integration of knowledge application, clinical care and appropriate levels of case complexity

**Continuous:** Capturing on-campus and clinical workplace based assessments, longitudinal measures of professionalism and clinical skill acquisition, as part of our e-portfolio approach

### Assessment tools

“MCQ (multiple choice question) format exams”: papers that use a mix of EMQ (Extending Matching Questions) and 1 in 5 SBA (Single Best Answer) questions. Students sit written papers at the end of Years One-Four.

OSCE: Objective Structured Clinical Examination. Students sit OSCES from Year Two (where it is introduced as an ‘assessment for learning’ exercise) and in Years Three-Five as an ‘assessment for progression’.

In Year 4, students also sit an ‘assessment for learning’ OSCE-style examination, incorporating stations with real patients, and delivered at hospital sites.

E-portfolio: the E-portfolio in the MBChB offers the students to collect evidence of their progression through the course, from Year One onwards. The E-portfolio also enables a programme of continuous, supported assessment. The requirements of the e-portfolio vary by year group and by placement, but within each year there is a mixture of Workplace Based Assessments (WBAs) incorporating requirements to observe or undertake certain procedures or skills, all of which must be signed off by a qualified practitioner, who also gives immediate qualitative feedback on the students’ skill level.

The requirements of the portfolio for any given year are communicated to students on commencement of that academic year. Students must complete all portfolio requirements by the first summative exam board in order for their portfolio to be considered a pass, and may attach additional evidence by resit exam board if required. Failing the e-portfolio requirements at re-sit exam board in any academic year results in the student being required to re-sit the academic year.

Students must sit and pass all course components within one academic year in order to be permitted to progress to the next academic year / graduate.

## Professionalism

This is a key component of all assessments within the MBChB programme, and one that is continued longitudinally. The work on the professionalism theme of our programme of assessment is informed by key literature.

Attendance is recognised as a key proxy for professional behaviour, at all stages of the course from Year 1, and at key events that pertain to engagement with the course and patient safety (e.g. hand hygiene training, Occupational Health meeting for those returning from high risk electives). There is a clear scheme that requires students to register absence (e.g. due to illness), or else to trigger a review for unauthorised absence.

Many of the components of the course also record professional attributes on a routine basis (team working, engagement, respect and interaction with colleagues) and integrate them into in-course assessments. This is undertaken across campus and clinical placements. Within a high stakes 'progression' assessment, professionalism is a key feature of OSCE rating scales and checklists, from both patient and academic/assessor viewpoints

Serial failure in relation to professionalism expectations may prevent students progressing to the end of Year assessments, and may trigger a review for Health and Conduct issues. Further detail on professionalism processes can be found in the School's Measuring Professionalism Policy.

## 5. Learning Outcomes

The overarching programme learning outcomes are defined by theme and supra-theme. These are mapped to Outcomes for Graduates and available upon request from the Director of Studies ([Dir.MbchB@liverpool.ac.uk](mailto:Dir.MbchB@liverpool.ac.uk))

Each placement, and teaching session, is defined by its own sessional outcomes. These are reviewed on an annual basis and as such not held in one central document. The required outcomes for each placement are available to view within the student portfolios for each placement.



Contact your Year Lead if you find any digital content difficult or impossible to use, either directly or with an assistive technology such as a screen reader.

Contact details for all teams and individual staff can be found on the [School website](http://www.liverpool.ac.uk/medicine/contact-us/email/).  
[[www.liverpool.ac.uk/medicine/contact-us/email/](http://www.liverpool.ac.uk/medicine/contact-us/email/)].