

Programme Specification 2025-26

CLINICAL MEDICINE: GRADUATE COURSE IN MEDICINE

Awarding Body	University of Cambridge
Teaching Institution	Faculty of Clinical Medicine
Accreditation Details	General Medical Council (GMC)
Name of Final Award	MB/BChir
Programme Title	Graduate Course in Medicine
UCAS Code	A101
HECoS Code	100276 (pre-clinical medicine), 100267 (clinical medicine)
Benchmark Statement(s)	Medicine
Qualifications Framework Level	Professional clinical training post-Honours
Date specification produced	January 2025

The University of Cambridge School of Clinical Medicine (Clinical School) was formally established in January 1975 when it subsumed the School of Clinical Research and Postgraduate Teaching that had existed since 1946; the first entry of 50 Clinical Students was admitted in October 1976. For the last few years, and up to and including 2016 entry, the annual intake to the Standard Clinical Course was around 160 students. Since September 2017, all preclinical students have continued on in Cambridge for the clinical component of the course, subject to satisfactory progression. This has increased the annual intake to around 270 students. Around 10 of those students are offered places on the MBPhD programme; in addition, around 40 students are admitted to the Cambridge Graduate-entry Course (CGC).

The Cambridge Graduate Course in medicine (CGC) is open to arts, humanities and science graduates who meet admissions requirements. It operates in conjunction with the West Suffolk Hospital, general practices in the Eastern region and four Mature Student Colleges: Hughes Hall, Lucy Cavendish, St Edmund's, and Wolfson. The Colleges provide academic and pastoral support as well as contributing to the selection process. The base for learning core medical science is the School of Biological Sciences; the main clinical base is the West Suffolk Hospital and, each year, students are attached to a General Practice where they have the opportunity to become part of the practice team, learn medicine in the community context and experience the long-term relationships that GPs and their practice staff have with their patients. Students also spend time at Addenbrooke's Hospital in Cambridge and, during Year 3 specialty placements, gain experience at the Royal Papworth Hospital on the Biomedical Campus, and in Regional Partner NHS Trust hospitals and other general practices throughout the East of England.

Educational Aims

- The University of Cambridge School of Clinical Medicine will
- *Educate and nurture student doctors within a supportive, sustainable, diverse, and inclusive learning community*
- *Empower students to develop lifelong learning and research skills, scientific understanding, clinical expertise, and professional values and behaviours*
- *Equip our graduates to adapt, thrive and lead in a complex and evolving clinical environment*
- *Develop graduates work in partnership with their patients and colleagues, valuing their needs and opinions*
- *Train future doctors who will serve the wider society locally, nationally and globally, with integrity and excellence*

Programme Structure

The duration of the standard clinical course is three academic years, starting in September of the first year and finishing in June of the final year. The second and third academic years start in August. Each year has its own focus, which complies with the General Medical Council (GMC) guidance in *Promoting Excellence: Standards for Medical Education and Training (2016)*, and the *GMC Outcomes for Graduates (2018)*:

Year 4: Core Clinical Practice

Year 5: Specialist Clinical Practice

Year 6: Applied Clinical Practice

The curriculum timetable is arranged to ensure experience of all common clinical problems and integration of teaching across the core curriculum themes, covering all major specialties, in a spiral curricular structure. The course intended learning outcomes are addressed by collaborative cross-curricular working between groups of specialists. The course intended learning outcomes are mapped to the GMC's Outcomes for Graduates; the Core Clinical Presentations, that are integrated throughout the clinical course, are mapped to the GMC/MLA Content Map.

Introduction –1.2 weeks

The Introductory Course takes place over five days. Students are introduced to the environment in which they will learn clinical medicine, have instruction in essential health and safety and have their first experience of clinical situations in hospital and General Practice. Then one day is spent at the Clinical School in Cambridge where students are introduced to the learning facilities provided on site; one day is spent in College.

During the Introduction, students meet their CGC Tutor and will have the opportunity to discuss their strengths and weaknesses and to identify any specific learning needs; and also their General Practitioner tutor.

Years 1-2: Core Medical Science and Clinical Medicine – 20 Months

Core Medical Science (5 x 8-week terms)

CGC students work alongside Standard Course students attending the same programme of lectures, seminars, tutorials, practical classes and supervisions.

Year 1

Functional Architecture of the Body

Topographical anatomy of the human body by dissection and demonstration with strong emphasis on functional, living and surface anatomy.

Foundations of Evidence Based Practice

Three sets of lectures covering history and philosophy; principles of epidemiology; principles of medical statistics.

Homeostasis

Physiological systems which underpin regulation of the body's internal environment and its responses to external threats; related practical classes in experimental physiology and histology.

Social and Ethical Context of Health and Illness

Introduction to the broader cultural aspects of healthcare and the medical profession.

Molecules in Medical Science

Molecular basis of how cells and organisms work including structure, function, biosynthesis and control, metabolic processes and the ways in which the genetic information in DNA is organised, expressed and inherited; core principles illustrated, where possible, by examples relevant to medical science to emphasise the significance of this basic knowledge to clinical practice – a practical course uses a range of biochemical techniques and includes a problem-solving component.

Principles of Cell Biology (optional)

A short course introducing basic principles.

Year 2

Biology of Disease

The nature and mechanisms of disease processes, includes cellular pathology, immunology, microbiology, parasitology and virology – practical classes integrated with lectures.

Mechanisms of Drug Action

General principles of drug action and specific effects of some drugs; selective toxicity and effects on neuromuscular, endocrine, cardiovascular and respiratory systems.

Neurobiology & Human Behaviour

The brain and mind; structure and function of the sense organs and CNS, effects of drugs on brain function; physiological aspects including emotion and emotional disorders (especially depression, anxiety, schizophrenia) child development, intelligence, learning and memory.

Head and Neck Anatomy

Structure and organisation of the human head and neck, with a focus on the relationship of structure to function; the anatomical basis for clinical examination, and the use of anatomical knowledge to understand common pathological conditions and interpret diagnostic images.

Human Reproduction

The biology of human reproduction, its clinical relevance, social context and influence on demographic trends; ethical and legal principles surrounding the practice of medicine in general and reproduction in particular.

Clinical Medicine

Opportunistic Learning

Initially, student learning is largely tutor-led. When students have acquired the basic clinical skills, they can benefit from opportunistic, self-directed learning by finding patients on the wards. Students can do this through: allocation to Consultants and their teams in medicine and surgery; joining designated Consultant teams while on emergency intake; identifying patients on the ward who will form the basis of the case-based discussions with their Clinical Tutors.

Clinical placements are based in West Suffolk and occur during the University vacations. A number of days are spent in General Practice and the remainder of the time in the hospital. During each placement, different clinical systems are addressed: signs and symptoms relating to the system are demonstrated in the hospital setting with clinical case demonstrations based on the Clinical Problem List, all being reinforced in General Practice.

During the early clinical placements, students aim to develop clinical method (process) and in later placements the emphasis is more on content. Similarly, the student's time during the early placements is well structured, but later there is more emphasis on self-directed study on the wards.

Clinical Skills 1 (3-4 weeks) - Learning the framework of Clinical Method, with an introduction to examination of major systems. The final week of Clinical Skills 1 is spent in General Practice.

Clinical Skills 2: (4 weeks) - Reinforcement of Clinical Method. The final week of Clinical Skills 2 is spent in General Practice.

Clinical Skills 3: (10 weeks) - Further development of Clinical Method and clinical features of the systems in general practice and on the wards so that the student has a basic competence in “clinical clerking” and a working clinical knowledge of all the body systems. Exposure to patients with a wide range of general surgical and medical problems. The final week of Clinical Skills 3 is spent in General Practice.

Clinical Skills 4: (3 weeks) – One week is spent in Cambridge undertaking Curriculum Theme based teaching; as well as a Formative SBA and De-brief. The students then have the opportunity to spend the remainder of the attachment shadowing a junior doctor as part of a ‘Junior Apprenticeship block’ at the West Suffolk Hospital.

Clinical Skills 5: (2 weeks) - Review of the clinical aspects of all the systems and further clinical experience. The second and final week of Clinical Skills 5 is spent in General Practice.

Review and Integration Weeks

These include several Clinico-pathological Conferences (CPCs) relating to the clinical subjects being studied. The CPCs frequently focus on the application of biomedical science knowledge, pathology and radiology learning to the process of clinical reasoning. Other core clinical curricular material covered in R&I weeks includes Pharmacology/Practical Prescribing, Improving Health, Palliative Care and topics from the Professional Responsibilities theme including medical ethics and law. This additional material is linked, wherever possible, with the presentations discussed in the CPCs. Learning outcomes and clinical presentations are mapped to the review and integration week learning events to provide further scaffolding for the student learning “The Patient’s Voice” programme enables a set of expert patients to meet the students and discuss their experiences of the health service and their illness. There is a regular Schwartz round for students.

Library Based Project

Opportunity to research a topic of interest during the Easter break in the second year.

Year 3 – Specialist Clinical Practice (SCP)

The aims of Year 5 are:

- To enable students to build on their clinical assessment, diagnostic and professional skills, including in more specialist clinical environments
- To provide students with experience of patient care in a variety of clinical settings based on the stages of the human lifespan
- To enable students to pursue areas of clinical and research interest in specialist and tertiary clinical care settings in a programme built around the research interests of the Clinical School and Cambridge Biomedical Campus.

SCP objectives are achieved by the integration of curriculum themes with clinical material. Learning outcomes and clinical presentations are mapped to the Year 5 learning events to provide a scaffold for student learning. Students continue their personal and professional development through exploration of further ethical dilemmas relating to the provision of specialist clinical services and this programme is supported by regular facilitated small group discussions in professional practice groups (PPGs), which support students in developing reflective practice.

Graduate course students join the Standard Course for the entirety of Year 3.

SCP Placements – 4 x 8 weeks

The SCP course comprises four x 8-week placements:

- Maternal and Child Health
- Neurosciences and Mental Health
- Specialist Medicine (including specialist cardiorespiratory practice and Infectious Diseases)
- Specialist Surgery (including Oncology)

The Specialist Medicine and Specialist Surgery blocks are Student Selected Placements in which students are able to choose a specialist clinical area of interest to pursue in more depth. The majority of these placements are based on the Cambridge Biomedical Campus, but there are also placements available elsewhere, including at the Royal Papworth Hospital and at Cambridgeshire and Peterborough NHS Foundation Trust. Undergraduate Clinical Supervisions continue every week, whenever students are based in Cambridge, providing ongoing bedside clinical teaching with adult medical and surgical patients, and guiding students' ongoing development of clinical assessment and reasoning skills.

Hospital Placements

These are in Maternal and Child Health (8 weeks), and in Neurosciences and Mental Health (6 weeks). Students will be based at CUHFT and/or at a partner regional hospital. During these placements students are again embedded within a clinical team and are expected to be involved in day to day clinical work as well as undertaking shift work (including night duties) alongside their team.

Primary and Community Care, three x 2 weeks

The Neurosciences and Mental Health, Specialist Medicine, and Specialist Surgery rotations include linked placements studying the relevant specialties in primary care and the community. The placements explore the realities of living with illness in the community including meeting with community-based carers and organisations.

Student Selected Placements

Two of the four rotations in Year 5 (Specialist Medicine and Specialist Surgery) are Student Selected Placements (SSPs). In these SSPs students are given the opportunity to explore some specialist and tertiary clinical care, which in most cases will be at Addenbrooke's Hospital or elsewhere on the Cambridge Biomedical Campus. The SSPs may include undertaking projects in clinical or translational research. There are also a small number of opportunities available to undertake SSPs at other Trusts, such as the Royal Papworth Hospital, and Cambridge and Peterborough NHS Foundation Trust. The Specialist Medicine and Specialist Surgery placements also include core experiences in specialist cardiorespiratory care (delivered at Royal Papworth Hospital), Oncology (delivered at CUHFT), and Infectious Diseases (delivered at CUHFT).

Review and Integration Weeks

Core clinical curriculum teaching continues in the Year 5 R&I weeks, the CPC programme forming the “backbone” of the programme, together with the linked themes (Professional Responsibilities, Improving Health, Prescribing/Pharmacology and Palliative Care).

Year 4 – Applied Clinical Practice (ACP)

The final year builds on the core learning and the clinical experiences students have had in previous years of the course and there are regular opportunities (through R&I weeks) to embed core learning, linking this with clinical experiences. The focus of the final year is on equipping students with the knowledge, skills and attitudes that allow them to practice independently. Senior placements in Medicine, Surgery, Acute Care/Perioperative care, and General Practice, enable students to build on their clinical experiences and learning, over the previous 5 years, improve their confidence and play a supervised participatory role in direct patient care.

CGCM students return to the West Suffolk Hospital for all of their hospital-based placements in the final year.

The aims of Year 4 are to enable students to:

- Recognise the severity of illness and institute immediate and continuing care to patients of any age group who are acutely and seriously unwell;
- Demonstrate an understanding of general medicine, surgery and acute care;
- Have acquired the Intermediate Life Support (ILS) Certificate;
- Demonstrate the knowledge, skills and attitudes required by the Clinical School in Final MB and by the General Medical Council to practise as a doctor in the Foundation programme.

By the end of Year 4 students will have developed the consultation, clinical management, diagnostic judgement and professional skills required for graduation. Students will have had responsibility for patient care, under close supervision, in a variety of clinical environments.

Elective

The Elective Studies Student Selected Component occupies seven weeks between Year 3 and Year 4. During this placement, students may study at home or abroad, following a clinical or research area of their own interest.

ACP Clinical Placements

Students rotate through four x 6-week placements in Senior Surgery, Senior Medicine, Senior Emergency (Acute) Care/Perioperative Care, and Senior General Practice. All students will have at least one ward-based attachment (Senior Medicine or Senior Surgery) prior to taking their Final MB Part III written papers (including the Medical Licencing Assessment Applied Knowledge Test) early in the Lent Term.

While some of the same subject matter may be covered in these placements as in previous years, the emphasis in ACP is very different. Students will be focused on ‘preparing for practice’ in this final year. They will have acquired, and been signed off for, key practical procedures as defined in the GMC Practical

Skills and Procedures document (2019), and will be expected to play a direct part in the care and management of patients under appropriate close supervision.

In their placements at West Suffolk Hospital NHS Trust (Bury St Edmunds), students will become involved in teams, and they may be rostered to work in the evenings, overnight and at weekends. Undergraduate Clinical Supervisors (resident doctors trained to teach) continue to meet students every week. Prior to their Final MB Part III clinical examinations the focus of the supervisions is on pulling together students' clinical reasoning and assessment skills. Post Final MB Part III the focus is moved to 'wardcraft' and the practicalities of working as a resident doctor post-graduation.

General Practice – 6 Weeks

Students are attached in pairs to a practice that they have not attended earlier in the course. They will see patients independently under the supervision of GP tutors, taking supported clinical decisions and following patients up. They are introduced to a patient with terminal illness in order to gain experience of palliative and terminal care in the community.

Hospital Placements: Senior Medicine, Senior Surgery – two x 6 Weeks

Students are attached to medical and surgical teams around the region. As far as possible, they play an integral role in the day to day work of patient care. They take responsibility for clerking and following up identified patients, including presenting the patients on rounds, performing practical procedures, escorting patients to investigation or therapy units, attending discharge planning meetings and other activities related to direct patient care. During these placements, students will also build on their sub-specialty skills including Dermatology, Rheumatology, Orthopaedics, ENT, Medicine for the Elderly, Ophthalmology, Palliative Care and Radiology.

Acute Care/Perioperative Care – 6 Weeks

Students learn about the practicalities of assessing and managing patients in a peri-operative setting, and with serious, acute and life-threatening illness across all specialties, to ensure that they are both competent and confident in this area before qualification. Time on this attachment will be divided between Emergency Departments, Intensive Care Unit and Theatres.

Review and Integration Weeks

Review and Integration programmes continue, the focus in Year 4 being on clinical management and all aspects of professionalism, alongside applied knowledge of dermatology, ENT and ophthalmology.

Practical Prescribing

This is a four-year teaching programme which includes on-line teaching, at the end of which students should be able to use the British National Formulary (BNF) correctly to support decisions about drug prescription; apply BNF general prescribing advice and current legislation regarding prescribing controlled drugs; record and report adverse drug reactions; carry out a range of drug dosage calculations and use Trust guidelines on good prescribing to identify and resolve inappropriate prescribing practice. Students will take the National Prescribing Safety Assessment (PSA) exam during Year 4; this must be passed before the degrees of Bachelor of Medicine and Bachelor of Surgery can be awarded.

Apprenticeship Block – 6 weeks

After the clinical final MB Part III exams, there is a formal apprenticeship block where students work semi-independently under supervision of nominated consultants to deliver direct patient care in an in-patient environment. This will be under close mentorship by both junior and senior doctors. It will be a unique opportunity to develop further working knowledge of what it really means to be a Foundation doctor, to practice key skills, to experience night shifts, and to hone the 'wardcraft' needed to be a successful junior doctor. Alongside this, students will also spend a day in a Hospice, will participate in Liaison psychiatry seminar(s), and will continue to build on their Communication Skills and Professional Responsibilities learning. Satisfactory completion of this block involves sign-off of a handbook in which students complete several supervised learning events and in which both senior and junior mentors write a report. The Apprenticeship block must be satisfactorily completed before the degrees of Bachelor of Medicine and Bachelor of Surgery can be awarded.

Foundation programme – 2 years

To be eligible for full registration with the General Medical Council, a doctor must complete a period of supervised service in an approved post.

Recruitment is by preference informed allocation through the UK Foundation Programme, which students apply to in the Michaelmas Term of Year 4.

Learning Outcomes

Knowledge and understanding

Core Medical Science (Second MB) Outcomes

At the end of Year 2, students will have:

- knowledge and understanding of the basic principles and processes of human biomedical science;
- been introduced to common forms of disease and recognise the contribution made by biomedical science to their understanding;
- begun to develop observational and deductive skills in associating molecular and cellular events with the production of disease;
- acquired basic laboratory skills and begun to develop skills in analysis and interpretation of experimental data;
- acquired basic information technology skills that allow retrieval of information;
- continued to develop skills in learning through curiosity and in oral and written communication.

Clinical Outcomes

Before the clinical course starts, students will be directed to complete a set of eLearning for Health modules, including Information Governance, to meet the mandatory requirements of all staff working within the NHS.

By the end of **Year 1**, students will:

- have received a grounding in the core skills required – clinical communication skills, clinical examination skills, practical procedural skills/resuscitation, professional skills and palliative care. They will also have received advice about experiential learning and using the available learning resources (including the on-line learning materials)

- have met their undergraduate clinical supervisors and followed a programme of instruction in basic clinical method including fundamentals of communication skills, basic history taking and clinical examination (through a peer-peer teaching programme with more senior students)
- have been introduced to basic concepts of patient investigation and clinical reasoning.

By the end of **Year 2**, students will be competent in basic clinical method. They will have met patients in hospital and in primary care with a wide range of acute and chronic general medical and surgical problems. Students will be able to:

- Communicate effectively in a range of clinical settings
- Take a clinical history
- Perform a physical examination
- Document their findings appropriately
- Show competence in basic practical skills
- Prepare and discuss a differential diagnosis
- Suggest appropriate investigations
- Interpret the results of simple clinical investigations

By the end of **Year 3**, the Specialist Clinical Practice course, students will be competent in the clinical, communication and practical skills relevant to the medical specialities throughout all stages of life. They will have had an introduction to the specialist medical practice in the Cambridge University Hospitals NHS Trust and exposure to the translational and clinical research underpinning major healthcare challenges, reflecting the research themes of the Cambridge Biomedical Campus and including Neurosciences and Mental Health, Maternal and Child Health, Cardiovascular Medicine, Inflammation and Cancer. Students will have met diverse patients both in hospital and in primary care and will:

- Recognise different patterns of health and disease throughout life and in different communities
- Demonstrate a range of portfolio cases
- Discuss issues relating to physical and mental disability at all ages
- Describe public health aspects of medicine relating to screening, prevention and population health at different stages of life
- Describe their involvement with clinical or translational research

By the end of **Year 4**, the Applied Clinical Practice course, by integrating the curriculum themes in further clinical practice, and by undertaking an Apprenticeship period after the Final MB examinations, students will have developed the consultation, clinical management, diagnostic judgement and professional skills required for graduation. Students will have responsibility for patient care under close supervision in a variety of clinical environments. Students will:

- Recognise the severity of illness and institute immediate and continuing care to patients of any age group who are acutely and seriously unwell
- Demonstrate an understanding of general medicine, surgery and acute care
- Have acquired the Intermediate Life Support (ILS) Certificate
- Demonstrate the knowledge, skills and attitudes required by the Clinical School and by the General Medical Council to pass Final MB (including the Medical Licensing Assessment (MLA)) and to practise as a doctor in the Foundation programme

Integrated Curriculum Themes

Integrated curriculum themes serve as scaffolding around which different specialties specify coordinated learning objectives and collaborate to deliver an integrated programme over the three-year period of the clinical course. Themes run throughout years 2 to 4 and learning and teaching in these areas forms the backbone of the Review and Integration programme.

The integrated curriculum themes are as follows:

- Applied Biomedical Science
 - Clinical Reasoning and Communication Skills
 - Practical Procedures
 - Practical Prescribing Skills
 - Therapeutics and Patient Management
 - Professional Responsibilities, comprising:
 - Professional behaviour
 - Medical Ethics and Law
 - Multiprofessional Teamworking
 - Reflection, learning and teaching
 - Management and Leadership
 - Patient Safety
 - Career development
- Improving Health
- Palliative Care
- Research and the INSPIRE programme

Transferable Skills

There are a number of transferable skills that are developed through students' experience at medical school. A description of some of these skills and how they can be acquired and demonstrated, is included on the NHS medical careers website: <https://www.healthcareers.nhs.uk/i-am/considering-or-university/studying-be-doctor/medical-school/transferable-skills-whilest-medical>¹.

Teaching & Learning Methods

Environment

Throughout the course, the emphasis is on experiential learning in clinical settings, seeing patients with a variety of clinical presentations, supported by small group seminars, tutorials and discussion groups. This learning from clinical experiences is further supported by large group activities including clinico-pathological conferences and lectures.

Learning Methods - Core Medical Science

Teaching is based in the central Cambridge science departments; students learn alongside standard course pre-clinical students attending lectures, practical classes and College supervisions.

Learning Methods

Clinical teaching is delivered on the wards (with additional opportunities to attend general and specialist outpatient clinics) and in general practice. There are also supervisions, tutorials and lectures. Three of the 4 years have the majority of clinical placements at the West Suffolk Hospital. In year 3 students have about 50% of the course delivered in Cambridge and the other half in regional hospitals/practices to take advantage of the different educational opportunities which they are able to offer including:

¹ External weblink; correct at time of printing

- Small student group sizes;
- Experience of different hospital/general practice environments;
- Exposure to a different range of patients and ethnic populations;
- Building relationships between students and consultants/GPs throughout the region, facilitating progression to the pre-registration/foundation period.

Students are expected to play an active role (supervised) in their clinical team, to follow up a group of patients including watching special investigations or treatment and to regularly present patients on ward rounds and in clinical and MDT (Multi-disciplinary Team) and MPT (Multi-professional Team) meetings.

Self-directed learning is encouraged during clinical placements; students are given guidance on learning methods in Year 1 and autonomous learning is supported by the on-line learning materials. Learning outcomes and clinical presentations are mapped to the learning events to provide a scaffold for this student self-directed learning.

Much of the material in the integrated **curriculum themes** is delivered in small groups, including clinical and communication skills work with simulated patients and actors and Professional Practice Groups, both of which occur throughout the course.

Learning methods - General Practice and Community-base

During Years 1 and 2, students are attached to General Practices, which provide students with a variety of patients to gain experience of conditions generally seen in the community. Four students in each year group are attached to a single practice, with designated General Practitioner time facilitating experiential learning, and giving opportunity to observe illness and disease over a long period. General Practitioners act as individual tutors and practices are linked to facilitate group learning.

Learning methods – Supervisions and tutorials

For all Cambridge undergraduate courses, weekly supervisions during term are organised for small groups of students in the College to develop and support departmental teaching. During Years 1 and 2, College groups meet a clinician tutor once a week in term to discuss an Index Case – a clinical case which puts the medical science into context. There are also up to three supervisions a week with a subject specialist to support the Second MB lecture programme. During clinical placements, students are allocated to a group for weekly bedside teaching with a local Undergraduate Clinical Supervisor who helps to develop clinical method. Topic-based tutorials and discussions of ethical problems may also be included.

For Year 3, the arrangements are the same as for standard course students. During Year 4, when students are based at the West Suffolk Hospital, students again have a local clinical supervisor.

CGC Tutors

CGC tutors are practising clinicians with a key role and responsibility in the development, management and delivery of the CGC who provide academic support to the students including the delivery of Index Case supervisions and weekly clinical tutorials while students are on attachments at the West Suffolk Hospital.

Lectures

The Years 1 and 2 Medical Science curriculum is based on the lecture programme organised by the Faculty of Biology supported by practical classes and demonstrations. In the clinical components of the CGC, clinic-pathological conferences (CPCs), are used to describe clinical conditions and the pathophysiology that underlies them; clinical experience then demonstrates and reinforces the content of the CPCs. Lecturers provide support materials which are made available to students electronically.

Self-directed learning

Self-directed learning is encouraged; students are given guidance on learning methods and autonomous learning is supported by the on-line learning materials.

Review and Integration (R&I) Weeks

Students are brought together as a whole year group regularly, throughout the clinical course for a series of 'Review and Integration' weeks, spread throughout the clinical course. These include a programme of lectures covering subject matter that, for educational or practical reasons, is best delivered in large groups. These weeks also facilitate student interaction within their year group.

Practical Skills and Procedures

Opportunities for learning practical skills and procedures are provided in all placements. Academic leadership and co-ordination of the practical skills programme is delivered via the clinical school under the supervision of the academic lead and the senior clinical skills tutors. There are clinical skills units/centres (CSUs) and clinical skills tutors based in Addenbrooke's Hospital and all the University's NHS partner hospitals. This allows an integrated programme of practical clinical skills to be delivered simultaneously in Cambridge and in all the regional NHS partner hospitals throughout the course.

The West Suffolk Hospital has its own Centre for Clinical Skills and Simulation (The Siklos Centre) and this can be accessed and utilised by medical students.

Library and IT Facilities

All Clinical Students are registered with the Medical Library on their arrival. As well as electronic resources available via University RAVEN logins, students are automatically registered for login to NHS ATHENS. All the key resources for learning and practicing evidence based medicine are available including Cochrane Library, Medline, Embase, NHS Evidence. Self-service networked printing, scanning and photocopying facilities are available, as well as private study space both in the library and in a dedicated E-Learning suite. Some private study spaces are equipped with PCs, and all can be used with Bring Your Own Device. There are additional PCs in the Sherwood Room (the student common room). There is Wifi throughout the Clinical School building.

All regional partner NHS Trusts have library, IT provision, and Wifi access.

The Clinical School virtual learning environment (VLE) hosts all the academic and administrative material for the curriculum. The online student and programme evaluation system and certain online assessments also form part of the Clinical School VLE.

Assessment Methods

Core Medical Science

Although medical sciences courses are mainly taught in the School of Biological Sciences, 2nd MB examinations are the responsibility of the School of Clinical Medicine. The Second MB examinations are taken in June in the first (MVST 1A) and second (MVST 1B) years. CGC students take only two of the three sections - the multiple choice questions on the lecture courses (Section I) and the practicals (Section II). Details of the timetables for the examinations and specimen papers are published on the Faculty of Biology website.

Clinical Medicine

A range of formative and summative assessments are in place using a variety of methodologies. All assessments are produced and marked according to validated standard-setting and marking techniques. Information about individual assessments and the theory underpinning them is discussed with students in a series of 'Demystifying Assessment' sessions, designed to remove some of the 'myths and legends' that often surround exams!

Progression

Formative assessments provide an important opportunity for students and staff to check on a student's progress and to ensure targets are being met. They provide feedback that can then be acted upon to further improve performance and remedy any deficits in knowledge and/or skills. For the most part, formative assessments tend to occur at the end of placements, while summative assessments are usually held towards the end of each academic year, but there is some overlap.

Summative assessments are also used to monitor progress, but unlike formative assessments they require a minimum level of performance to be achieved to allow progression on the course. In essence, they serve as checkpoints that must be cleared to continue to the next stage. This is a professional practice course, with a spiral curriculum in which learning in one year builds on learning from the years before. Therefore it's very important that students meet the academic and professional standards of the clinical course, at each stage of study, before being able to progress any further through the course. Students who are not able to do this will be required to take intermission whilst they discuss future plans with their College and the Clinical School. For example, if a student is unable to sit their summative assessments at the end of Year 3, they will be able to start the next clinical year in August, and take their first attempt in September/October. However, if they fail the examination, they will not be able to continue on the course; they will be required to take intermission during that academic year, and sit and pass their outstanding Final MB examinations prior to rejoining the course the following August.

Students cannot be entered for Final MB summative examinations unless they have passed all placements and other relevant requirements for that year of study. Students who do not satisfactorily complete a placement are given, at the discretion of the Clinical Dean, the opportunity to attend remedial teaching during holidays and self-directed study periods. Any student failing two placements may be required to meet with the Clinical Dean to determine whether he/she will be allowed to continue on the course or be

required to intermit and then resit the year.

Students are permitted two attempts at each Final MB examination; exceptionally, if there are extenuating circumstances, the Faculty Board of Clinical Medicine may give permission for an additional attempt; ahead of this, a programme of revision and clinical placements to maintain their skills is organised.

All Years

Assessment occurs at the end of each clinical placement and may include the result of observation of student performance by the multidisciplinary clinical team together with more formal assessments such as written tests, objective structured clinical examinations (OSCE's), or Mini-Clinical Evaluation Exercises (Mini-CEX's) organised by the clinical team. The assessment methods for each course component are determined by the Deanery team in consultation with Specialty Directors and Theme Co-ordinators; they are explained to students in the information published in the Clinical School Moodle.

Students will have a one-to-one progress review meeting in years 3 and 4, either with their College Clinical Director of Studies, or with a senior member of the academic teaching team at the Clinical School.

Student Selected Components

Throughout the course, each Student Selected Component (SSC) is assessed by SSC supervisors in a way designed to be most appropriate to the activity concerned. There is an SSC Portfolio which must be completed satisfactorily before entry to the Final MB Part III examinations.

Placement Records

For each year of the course, assessment results are recorded in a written report. A Placement Record for each student is completed at the end of individual placements by the Specialty Director, regional hospital Undergraduate Specialty Tutor or responsible consultant. Students are graded on their performance in three areas: attendance, knowledge and skills, and professionalism. In addition to this students get an overall grade. If students fail a placement, they must remediate and pass it, prior to being allowed to enter Final MB examinations. If students receive two or more borderline passes for placements, they may not be entered for final MB.

Placement evaluative criteria are as follows:

	For Review (/Fail)	Borderline	Pass	Outstanding
Attendance	<input type="checkbox"/> Was absent for significant proportion of the placement	<input type="checkbox"/> Missed a number of regular and scheduled activities	<input type="checkbox"/> Was present for all regular and scheduled activity	<input type="checkbox"/> Goes beyond the requirements of the placement
Knowledge & Skills	<input type="checkbox"/> Insufficient clinical skills and knowledge <input type="checkbox"/> Inability to learn from clinical practice <input type="checkbox"/> Very poor time management	<input type="checkbox"/> Limited clinical skills and knowledge <input type="checkbox"/> Some ability to learn from clinical practice <input type="checkbox"/> Poor time management	<input type="checkbox"/> Satisfactory clinical skills and knowledge <input type="checkbox"/> Able to learn from clinical practice <input type="checkbox"/> Adequate time management	<input type="checkbox"/> Excellent clinical skills and knowledge <input type="checkbox"/> Able to learn effectively from clinical practice <input type="checkbox"/> Excellent time management

Professionalism	<input type="checkbox"/> Significant concerns about professional behaviour <input type="checkbox"/> Very poor communicator <input type="checkbox"/> Unwilling to take on responsibility <input type="checkbox"/> Does not integrate with the team	<input type="checkbox"/> Has demonstrated some unprofessional behaviour <input type="checkbox"/> Poor communicator <input type="checkbox"/> Limited ability to take on responsibility <input type="checkbox"/> Ineffective team member	<input type="checkbox"/> Caring <input type="checkbox"/> Respectful <input type="checkbox"/> Un-biased <input type="checkbox"/> Effective communicator <input type="checkbox"/> Accepts responsibilities <input type="checkbox"/> Works with the team	<input type="checkbox"/> Caring <input type="checkbox"/> Respectful <input type="checkbox"/> Un-biased <input type="checkbox"/> Effective and confident communicator <input type="checkbox"/> Keen to accept responsibilities <input type="checkbox"/> Outstanding team member
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Year 1 and 2 Assessments (including Final MB Part I)

At the end of Clinical Skills 1, 2,3, 4 and 5 each student meets with a CGC Tutor for discussion of the Supervision Reports, Performance Report, feedback from hospital and GP tutors and assessment results. The student is made aware of his/her progress.

At the end of Year 1 there is a formative OSCE, and a formative Single Best Answer paper.

Students who fail a Second MB examination at the end of year one or year two will resit in September. If students fail a Second MB resit, they will not be able to continue with the course. In exceptional circumstances, and where mitigating circumstances have been declared, students may apply to the Faculty Board of Clinical Medicine for an exceptional third attempt. Students may need to intermit from the course for an academic year whilst they make the case to the Board and await the outcome.

Final MB Part I

Final MB Part I comprises:

- Single Applied knowledge Test (AKT): a 3 hour written examination, comprising single best answer (SBA) questions covering all of the major clinical specialties represented in Year 4, including pathology.
- Clinical Exam: comprising simulated clinical encounter examination (SCEE), objective structured clinical examination (OSCE), and practical skills stations. The exam typically comprises 10 stations, which are split principally between SCEE and OSCE formats, with a single practical skills station included in the OSCE circuit.

Students on the CGCM sit the Clinical exam (OSCE and SCEE) at the same time as the Standard course students at the end of Easter Term. They then sit the AKT written examination at the later time of September/October in their 3rd year. This is at the same time as the Standard course resit exam. If they fail this exam they will receive remedial teaching and be reassessed in the November/December of that academic year; if they fail the reassessment they will not be able to continue with the course.

In exceptional circumstances, and where mitigating circumstances have been declared, students may apply to the Faculty Board of Clinical Medicine for an exceptional third attempt. However, students will need to intermit from the course for the remainder of the academic year whilst they make the case to the Board and await the outcome. If their request is approved, the examination would need to be taken and passed in the Easter Term, prior to rejoining the course and re-starting the year, in August.

Year 3 Assessments (including Final MB Part II)

There are a series of practical skills that map to the GMC's Practical Skills and Procedures document. Students will be expected to be competent at all of these skills, in a supervised setting, by the end of Year 3. Competence is assessed in various ways, including via repeated observation and feedback, throughout previous years.

Year 3 concludes with Final MB Part II comprising:

- Single Applied knowledge Test (AKT): a 3 hour written examination, comprising single best answer (SBA) questions covering all of the major clinical specialties represented in Years 4 and 5, with a specific emphasis on the pathological aspects of disease, and obstetrics and gynaecology and paediatrics.
- Single Short Answer Question (SAQ) exam: a 3 hour written examination, comprising 10 short answer questions (extended clinical cases) covering all of the major clinical specialties represented in Years 4 and 5, with a specific emphasis on the pathological aspects of disease, and obstetrics and gynaecology and paediatrics.
- Clinical Exam: comprising simulated clinical encounter examination (SCEE) and objective structured clinical examination (OSCE) stations. The exam typically includes 12 stations, which are split equally between those testing aspects of Obstetrics and Gynaecology and those testing Paediatrics. This assessment comprises part of the Medical Licensing Assessment (MLA) Clinical and Professional Skills Assessment (CPSA) – see Year 6 Assessment section for further details.

Students who fail Final MB Part II in the Easter Term, will receive remedial teaching and be reassessed in September/October of that year; if they fail the reassessment they will not be able to continue with the Clinical Course. In exceptional circumstances, and where mitigating circumstances have been declared, students may apply to the Faculty Board of Clinical Medicine for an exceptional third attempt. However, students will need to intermit from the course for an academic year whilst they make the case to the Board and await the outcome. If their request is approved, the examination would need to be taken and passed in the Easter Term, prior to rejoining the course and re-starting the year, in August.

Year 4 Assessments

Elective Report

All students submit a report on their elective the purposes of which are to:

- Provide a detailed record of the elective period
- Provide experience in presentation of considered written work
- Contribute to data bank of elective opportunities for succeeding generations of students
- Be assessed for 'best elective report' award

Prescribing Safety Assessment

Students will take the National Prescribing Safety Assessment (PSA) exam during Year 4; this is an online exam, and must be passed before the degrees of Bachelor of Medicine and Bachelor of Surgery can be awarded.

Apprenticeship block

After Final MB Part III clinical examinations, there is a formal apprenticeship block where students work semi-independently under supervision of nominated consultants to deliver direct patient care in an in-patient environment. Satisfactory completion of this block involves sign-off of a handbook in which students complete several supervised learning events and in which both senior and junior mentors write a report.

The Apprenticeship block must be satisfactorily completed before the degrees of Bachelor of Medicine and Bachelor of Surgery can be awarded.

National Medical Licensing Assessment (MLA)

The Medical Licensing Assessment (MLA) is a two-part assessment made up of an applied knowledge test (AKT) and a clinical and professional skills assessment (CPSA) which all students will need to pass as part of their degree. The MLA tests the core knowledge, skills and behaviours of doctors who want to practise in the UK, and provides the assurance that anyone who obtains a UK medical degree has shown they can meet a common and consistent threshold for safe practice before they are licensed to practice. For students at UK medical schools, the assessment is led and delivered by medical schools and regulated by the General Medical Council (GMC).

The AKT and CPSA form part of the Final MB examinations, as described in these sections. As such, they are subject to the rules and regulations governing all Final MB examinations, as set out in the University's Statutes and Ordinances. This includes regulations around the timing of examinations, and the number of permitted sittings.

Final MB Part III

The Final MB Part III examination is designed to assess:

- Knowledge and experience of Medicine and Surgery in their widest sense
- Ability to apply that knowledge and experience to the management of patients
- Ability to communicate effectively with patients and to respect their autonomy
- Knowledge and experience of ethical and legal principles relevant to clinical medicine

Final MB Part III is divided into three components:

- Single Applied knowledge Test (AKT): this comprises two, 2 hour digitally delivered papers, comprising single best answer (SBA) questions covering all of the major clinical specialties represented in Years 4, 5 and 6 of the course. This assessment is the MLA AKT exam.
- Single Short Answer Question (SAQ) exam: a 2 hour written examination, comprising 5 or 6 short answer questions covering key aspects of public health, ethics and law as applied to medicine.
- Clinical Exam (CPSA): comprising simulated clinical encounter examination (SCEE) and objective structured clinical examination (OSCE) stations. The exam typically includes 14 stations, which are split equally between SCEE and OSCE format, and delivered in two separate circuits. This assessment represents a major component of the MLA CPSA.

Students who fail one or more of the Final MB Part III written components may resit later in the Lent Term in Year 4, and before the Final MB Part III Clinical Exams.

Students will be expected to repeat Year 4 and resit all Final MB Part III components if they fail:

- the clinical component at the first sitting in April/May;
- a written component resit (if a request for an exceptional third attempt is granted).

For all examinations, performance is reported : 'Pass with Distinction'; 'Pass' or 'Fail'. Exceptional performance is also recognised by the award of prizes.

Programme requirements

Attendance requirements for clinical placements

Clinical medicine can only be learned through experience in a range of clinical environments. Clinical

teachers guide students' patient-based learning, and this is supported by lectures, seminars and private study. Full attendance at clinical placements is required by the Clinical School and the General Medical Council; it is expected that students will attend all clinical placements and scheduled clinical teaching diligently, and students are trusted to take responsibility for their own learning and professional behaviour.

It is understood that illness and other factors mean that 100% attendance is not always possible. Nonetheless, there is a threshold of attendance beyond which the Clinical School needs to take action, for the purposes of both welfare monitoring and educational governance. In line with other UK medical schools, the minimum threshold for attendance is 80% of the days of a clinical placement. There are various attendance monitoring processes in place at CUHFT, West Suffolk hospital, and other regional hospitals, and students are expected to engage fully with these. These processes ensure that the School has the required data to identify inadequate attendance.

Attendance

Students should attend all timetabled teaching and other scheduled clinical activities. If students expect to be absent, they should notify their placement administrator in advance. Information about approved absence from the course (for example illness, compassionate leave, academic reasons, or discretionary leave) is available on the Welfare pages of the student VLE. Unsatisfactory attendance (due to fewer than 80% of days attended and/or poor engagement when present) will result in students failing the placement. In that situation, students will need to liaise with the placement lead to devise a plan to make up the missed experiences to the satisfaction of the placement lead and the Deanery team. Students need to pass all clinical placements and complete all coursework before sitting end-of-year exams each year.

Personal learning log

Students are expected to keep their own personal learning log, noting what clinical activities they have undertaken on a weekly basis and reflecting on their learning. Students must also record their attendance at core clinical teaching during R&I weeks. Random checks of student attendance logs will be made and regular head counts performed during R&I weeks.

Working Hours

The expectation is that students work 48 hours per week, which includes both clinical time and personal study. Students should expect to be doing clinical work every day and sometimes during the evenings and weekends. Students who are regularly absent from placements on Fridays will be given a Fail grade for that placement and required to do additional work to achieve a pass.

The following is a general guideline for required attendance at clinical placements:

- Monday - Friday 0900h – 1700h

Start times may be variable, and students should expect that on some placements their attendance is required before 0900h or after 1700h. Friday afternoons can be flexible. If clinical work such as Outpatients, theatre lists or consultant ward rounds on a student's firm or specialty are on Friday afternoons, then students must attend them. If there is no obvious learning opportunity available, students may use Friday afternoons for administration tasks, personal study, attending appointments etc.

Throughout the Course

Placement Records

Specialty Directors/Undergraduate Specialty Tutors provide a report on each student at the end of a placement, their purpose is to:

- monitor attendance and performance - information is held in a student's personal electronic record;
- identify students with specific problems, ensuring that early action may be taken;
- monitoring the quality of education provided.

Undergraduate Clinical Supervisor Reports

Colleges require Undergraduate Clinical Supervisors to provide termly reports on student progress; the Senior Tutor/Director of Studies refer any serious difficulties to the Clinical Dean.

Student Support

The college tutorial system, Directors of Studies and University Counselling Service offer personal support and advice to students. In the Clinical School, the Clinical Dean and Sub-Deans, and all members of the Education Division team are always pleased to talk to students and to offer help and advice. There is a dedicated Welfare team within the School, and there are a number of welfare related resources on the clinical student VLE.

To support students who experience serious mental health difficulties, the Clinical School has set up and funds a rapid referral mental health service, through which students have fast access to a psychiatrist and to a psychologist, if required.

Managing Teaching Quality and Standards

Opinions from students about teaching and educational facilities are actively sought throughout all courses and changes are made in response to the suggestions received.

Placement Evaluation

At the end of most placements and course modules, students are invited to comment by completing online forms. Course organisers value feedback from students on the strengths and weaknesses of placements and hospitals. Many changes to courses and provision for students, have been made following student feedback.

Committees

Courses are managed by formal and informal committees most of which have student representative members. Key committees are the Faculty Board of Clinical Medicine, Medical Education Committee, Clinical Education Quality Committee, Curriculum Committee, Assessment Committee, and Student/Staff Liaison Group.

Student Feedback

Students may raise any concerns, at any time during the course, with the Clinical Dean, Clinical Sub-deans (including Regional Sub-Deans), MB/PhD Programme Director, their Clinical Supervisors, College Director of Studies or the administrators either in the Education Division in the Clinical School, or in regional hospitals.

In addition, during each R & I week, representatives of the deanery and administrative team are available at the end of a dedicated session (the 'Feedback to Faculty' session) to answer questions from students; notes are taken and circulated to student representatives and the Chair of the Student/Staff Liaison Group.

Quality assurance

There are various processes in place for monitoring placements. These include Quality Assurance visits at which students attached to the hospital at the time are invited to give feedback on all aspects of the provision of teaching and facilities. All teaching General Practices are visited on commencement of teaching and marked against a set of quality criteria; teaching quality is then regularly monitored.

Staff Development and Appraisal/Performance Review

All staff contributing to the education of students are encouraged to attend relevant training courses; there are regular reviews of their professional performance include their role as educators. The School provides an HEA accredited staff development programme (the Integrated Foundations of Medical Education) free of charge to all undergraduate educators. All junior doctors involved with the Undergraduate Clinical Supervisor programme are selected, inducted and appraised (through an annual appraisal process), as well as being invited to attend the School's HEA accredited staff development programme. Staff are invited to apply to study for the University's Postgraduate Certificate, Diploma, and Masters programmes in Medical Education, through the University's Institute of Continuing Education.

Graduate Employability

All students who successfully complete the course secure pre-registration Foundation posts.

The University's Careers Service maintains links with relevant employers and takes into account employer needs and opinions in the services which it provides for students. The Careers Service also allocates a

Careers Adviser to each College, Faculty and Department to act as a point of contact.

Indicators of Quality

The MBBChir completion rate is nearly 100 % with most students passing at first attempt; there are usually no more than one or two withdrawals from the course each year.

Cambridge students also have a good record of winning national prizes, bursaries and contributions to educational and research conferences within the UK and nationally.

Reports from external Examiners and Consultants who have supervised Student-selected Components and Electives are generally highly complimentary of student knowledge, performance and conduct.

Every effort has been made to ensure the accuracy of the information in this programme specification. At the time of publication, the programme specification has been approved by the relevant Faculty Board (or equivalent). Programme specifications are reviewed annually, however, during the course of the academical year, any approved changes to the programme will be communicated to enrolled students through email notification or publication in the *Reporter*. The relevant faculty or department will endeavour to update the programme specification accordingly, and prior to the start of the next academical year.

Further information about specifications and an archive of programme specifications for all awards of the University is available online at: <https://www.camdata.admin.cam.ac.uk/>