

University of Cambridge: Programme Specifications

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CLINICAL MEDICINE: MB/PhD PROGRAMME

1	Awarding Body	University of Cambridge
2.	Teaching Institution	Faculty of Clinical Medicine
3.	Accreditation Details	General Medical Council (GMC)
4.	Name of Final Award	MB/BChir and PhD
5.	Programme Title	Clinical Medicine: MB/PhD Programme
6.	UCAS Code	n/a
7.	JACS Code	A300
8.	Benchmark Statement(s)	Medicine
9.	Qualifications Framework Level	8 (Doctoral degrees) and Clinical Training
10.	Date of Revision	June 2013
11.	Last Reviewed	October 2012

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. The current annual intake to the Standard Clinical Course of students who have completed three years of pre-clinical study is 160 up to ten of whom are offered places on the MB/PhD Programme; in addition, 20 students are admitted to the Cambridge Graduate-entry Course (CGC).

The focus of the Clinical School's activities is the Cambridge University Hospitals NHS Foundation Trust (Addenbrooke's Hospital) situated on the Cambridge Biomedical Campus, an outstanding centre for clinical practice, medical education and biomedical research.

There are significant links in teaching and research with the local Cambridgeshire & Peterborough NHS Foundation Trust, Papworth NHS Foundation Trust, West Suffolk Hospitals NHS Trust, district general hospitals throughout the Eastern Region, local and regional General Practices and primary care organisations.

The MB/PhD Programme leads to the MB, BChir and PhD degrees and is designed for medical students who are interested in academic or research careers by enabling them to integrate a three-year period of research with their clinical education.

The clinical component of the curriculum is designed to equip students for a lifetime of medical practice in a changing world with emphasis on the acquisition of clinical skills by direct patient contact. At the start of the programme, students follow the Standard Course Stage 1 curriculum up to and including the Stage 1 Student-selected Component. Following a clinical academic module and subject to satisfactory progress, this is followed by a three-year period of full-time research combined with regular clinical education, including weekly

clinical supervisions and monthly clinical seminars. It concludes with students rejoining the clinical course to complete their studies with either the Standard or Cambridge Graduate courses, depending upon the time of completion of the PhD.

During the research component, students are based mainly in the laboratory or department of their choice at the Addenbrooke's complex or at one of the University sites in central Cambridge.

Aims of the Programme

The University of Cambridge School of Clinical Medicine aims to educate individuals who:

- are honest, caring, knowledgeable and competent and equipped to maintain good medical practice;
- show respect for their patients at all times;
- are knowledgeable about the scientific basis of medicine, including its most recent developments;
- have excellent communication skills for use in the health care of diverse populations;
- understand the importance of physical, psychological and social aspects of patient care;
- possess a sound appreciation of ethical, legal and community issues;
- are able to work effectively in multidisciplinary teams;
- possess the capacity for inquiry and are prepared to continue learning, teaching, evaluation and research throughout their careers

and are fully prepared for their roles as doctors.

Knowledge and Understanding

Students should acquire the knowledge, skills and behaviours appropriate to the core curriculum of each clinical course Stage and the additional aims of the MB/PhD Programme as follows:

By the end of **Year 1**, students should have:

- completed Stage 1 of the Clinical Course;
- completed the Academic Medicine module including clinical experience and basic laboratory skills;
- investigated research project options;
- applied to and been accepted by a department and Research Supervisor;
- completed University and funding body research application forms;
- attended the annual MB/PhD Symposium.

By the end of **Year 2**, Students should have:

- continued to develop clinical skills through attending weekly supervisions and monthly seminars;
- completed the Graduate School Induction Programme covering safety, library resources, ethics, literature searches, IP, data management, presentation skills etc.;
- attended Graduate School courses as directed by the Director of Graduate Education;
- prepared a research plan;
- maintained a Personal Progress Log;
- attended the annual MB/PhD Symposium.

By the end of **Year 3**, Students should have:

- continued to develop clinical skills through attending weekly supervisions and monthly seminars;
- completed a year's research and submitted a satisfactory Year One report to the Degree Committee;
- attended Graduate School courses as directed by the Director of Graduate Education;
- attended an external symposium/conference;
- completed 'bench', information gathering phase of research according to plan;
- prepared a first draft thesis;
- maintained a Personal Progress Log;
- attended the annual MB/PhD Symposium.

By the end of **Year 4**, Students should have:

- continued to develop clinical skills through attending weekly supervisions and monthly seminars;
- attended Graduate School courses as directed by the Director of Graduate Education;
- prepared and presented a talk on their research to an appropriate group, e.g. a departmental meeting, MB/PhD Symposium, external symposia/conferences;
- completed and submitted the thesis;
- maintained a Personal Progress Log;
- attended the annual MB/PhD Symposium.

By the end of the **Year 5**, students should have:

- attended the annual MB/PhD Symposium.
- completed Level 2 of the clinical course and Final MB Part I and Part II.

By the end of **Year 6**, students should have:

- attended the annual MB/PhD Symposium.
- completed the final year of the clinical course Final MB Part III.

Teaching and Learning Methods

Clinical Course Components:

As for Standard Clinical Course.

Research Component

As for Graduate School PhD programmes.

Assessment Methods

Clinical Course Components:

As for Standard Clinical Course.

Research Component:

At the end of year one of the PhD, a report on progress is submitted for examination by two assessors (neither of whom is the research supervisor) and a viva is held. At the same time, the supervisor writes a report on progress. These two reports, taken together, are submitted to the Degree Committee for approval. If the reports are favourable and the assessors and supervisor recommend progression, the student continues with PhD research. If not, a second attempt may be allowed, or a candidate may be advised to register for a master's degree instead.

All PhD students record their transferable skills training by completing a Personal Progress Log; this log is reviewed at the end of each year by the student's Research Supervisor, and it may be requested for inspection by the Degree Committee when considering the 'first year report' or the final dissertation.

The PhD thesis should be submitted before the return to clinical studies, ideally allowing five weeks for the organisation of the viva.

The requirements for the thesis and its examination for the PhD degree are exactly the same as for any PhD in the Faculty of Clinical Medicine.

Skills

Clinical Course Components: as Standard Clinical Course.

Transferable Skills: throughout, as Standard Course.

Programme Structure

The duration of the MB/PhD Programme is six academic years, starting in September of year one and finishing in June of year six (5 years and 9 months).

Clinical Component – 3 years

Most of the clinical course is based in Cambridge although at least one third is delivered in regional hospitals to take advantage of the different educational opportunities which they are able to offer. At the beginning of each Stage of the course, each student receives a detailed personal schedule which shows the length and locations of their placements. Students attend Stage 1 of the Standard Clinical Course for six months; followed by a six-week Academic Medicine Module before taking up their research studentships. After three years of research, students resume clinical studies for a final two years. For the final Clinical year, students may join the Cambridge Graduate Students based mainly at the West Suffolk Hospital or follow the Standard Clinical Course curriculum depending on their time of completion of the PhD.

Academic Module – 6 weeks

The objectives of this module are to:

- show students how modern science has had an impact on the treatment of disease;
- introduce students to research methodology and identify the areas of expertise they will require for their research project;
- introduce students to their research field to ensure a smooth transition from clinical study to research.

Each day, students spend half their time (normally mornings) on the medicine wards at Addenbrooke's taking the history of a patient and preparing a detailed case-history with a focus on pathogenesis, their clinical skills are assessed and they have the opportunity to present a case at the weekly Medicine departmental meetings. For the rest of the day, students spend time in their research departments and the library under the direction of their Research Supervisor: they identify and begin to acquire the scientific expertise they will require for their research, attend departmental meetings, undertake literature searches and background reading.

Research Component - 3 years

The research component is based in Cambridge; students retain their medical student status and remain on the Medical Student Register throughout the research period. Students are required to continue to devote time to their clinical work while undertaking research including:

- weekly clinical supervisions (weekly one hour bedside clinical teaching) as for the Standard Clinical Course.
- monthly clinical-topic seminars. The curriculum for the monthly seminars is mapped to the Standard Clinical Curriculum with a rolling three year programme reinforcing student's prior learning in Stage 1, delivering core clinical educational content (e.g basic life support), and giving students insight into some of the common clinical problems they may encounter in Stage 2.
- The programme generally includes in each one year cycle:
 - a review of several clinical problem areas encountered stage 1
 - at least one clinical problem area they will encounter in stage 2
 - a review of practical procedures learning from stage 1
 - a Basic Life support review course
 - a review of a Stage 1 CCS component
 - a review of a Stage 1 patient investigation component
 - a review of a Stage 1 radiology component

Course content is monitored by the Clinical School's Curriculum Committee to ensure compliance with the requirements of the GMC (Tomorrow's Doctors 2009) and the QAA (Benchmark Statement for Medicine).

Transferable Skills – throughout the Research Component: Students are required to complete ten days of transferable skills training a year, accumulating 60 credits over a period of three years. Some courses are compulsory; others are determined by the students in consultation with their Research Supervisor. Optional courses include:

- Bioinformatics Introductory Practical Course
- Communicating with the Public
- Ethical Conduct
- How to make a Poster
- How to Write Your Dissertation
- Identifying and Commercialising Intellectual Properties
- Interview Techniques for PhD Life Scientists
- Keeping a Lab Notebook
- Project Management
- Teaching Undergraduates
- The First Postdoc
- The Skilled Graduate
- What is expected of a PhD Student
- Writing a Research Grant Application
- Writing a Scientific Paper

Programme Requirements

Clinical Component

Progression requirements are as for the Standard Clinical Course.

Attendance at more than 50% of the Clinical Seminar Programme is required during the research phase – failure to adequately attend will require review with a member of the deanery team and possible referral for review by the progress panel.

In addition, during the research period, the Clinical Supervisors produce a yearly report on the clinical progress of each student assessing:

- Background Knowledge;
- Communication with Patients;
- History taking/Presentation;
- Examination Technique;
- Problem Solving skills.

Failure to adequately attend Clinical Supervisions (monitored through CamCORS) may result in referral for review by the progress panel.

Research Component

A condition for entering the Research Component is a high score in the Stage 1 Assessment.

At the end of the first year of research, students must submit a satisfactory Year One report to the Degree Committee.

The PhD thesis should be submitted before the return to clinical studies.

Further information

Graduate Employability

All students who successfully complete the course secure pre-registration Foundation posts; over 80% secure their first choice of post.

The Careers Service maintains links with relevant employers and takes into account employer needs and opinions in the services which it provides for students. Details of its services can be found at <http://www.careers.cam.ac.uk>. The Careers Service also allocates a Careers Adviser to each College, Faculty and Department to act as a point of contact.

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.

Committee Structure: courses are managed by formal and informal committees all of which have student representative members. Key committees are the Faculty Board of Clinical Medicine, Medical Education Committee, Clinical Education Quality Committee, Curriculum Committee, MB/PhD Programme Committee and Student/Staff Committee.

Ad hoc Feedback: students may raise any concerns, at any time during the course, with the Clinical Dean/DOMECS, Associate Clinical Deans, Clinical Sub-deans, MB/PhD Programme Director, their Clinical Supervisors, College Director of Studies or the administrators who act as secretaries to the committees:

Hospital and General Practice Visits: all placements are monitored by the Clinical Dean/DOMECS who visits every teaching hospital on a regular basis. The visit includes discussion with students attached to the hospital at the time to hear their views 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.

Placement Evaluation: at the end of most placements and course modules, students are invited to comment by completing an online questionnaire. Course organisers value feedback from students on the strengths and weaknesses of placements and hospitals. Many changes to the courses and selection of hospitals for placements have been made as a consequence of student reports.

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 Deans and all members of the Education Division team are always pleased to talk to students and to offer help and advice.

Indicators of Quality

The MB, BChir 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.

There are usually no more than one or two withdrawals each year from the MB/PhD Programme; the most likely time of withdrawal is in year one before the research phase has begun. Students are able to transfer back to the Standard Clinical Course at any stage.

Completion rates for PhDs are standard for Cambridge.

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.