

University of Cambridge: Programme Specifications

Every effort has been made to ensure the accuracy of the information contained in this programme specification. At the time of publication, the programme specification has been approved by the relevant teaching Faculty or Department. It is, however, natural for courses to develop and change over time and we reserve the right, without notice, to withdraw, update or amend this programme specification at any time.

SCHOOL OF CLINICAL MEDICINE PROGRAMME SPECIFICATION: STANDARD CLINICAL COURSE

Awarding Institution:	University of Cambridge
Teaching Institution:	University of Cambridge
Programme accredited by:	General Medical Council
Final Award:	MB, BChir
Programme Title:	Clinical Medicine
UCAS Code:	A100
Relevant QAA Subject Benchmark group	Medicine
Annual Intake:	145
Admission Requirements:	The School welcomes applications from HEFC¹ quota pre-clinical students who have: <ul style="list-style-type: none">• completed two years of pre-clinical study in medically-related subjects;• obtained an honours degree;• passed, or gained exemption from, the Cambridge Second MB.
Date of production or revision of programme specification:	August 2005 – first entry September 2005

Introduction

The mission statement for Curriculum 2005 is as follows:

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

¹ HEFC's medical student quota is set by the government's Medical Workforce Standing Advisory Committee. Only students admitted as one of the quota in the first year of medical education are eligible for a place on a clinical course.

- Possess the capacity for inquiry and are prepared to continue learning, teaching, evaluation and research throughout their careers

and to prepare them fully for their roles as doctors.

The programme in clinical medicine is based at the Cambridge University Teaching Hospitals NHS Trust (Addenbrookes Hospital) situated on the Cambridge Biomedical Campus, an outstanding centre for clinical practice, medical education and biomedical research. Students also study at a number of Regional Partner NHS Trust hospitals throughout East Anglia and in teaching general practices both in Cambridge and the surrounding region.

The clinical curriculum is three years in duration and comprises three Stages, each with its own focus.

Curriculum Stages

Stage 1. Clinical Method

Stage 2. The Life Course

Stage 3. Preparation for Practice

Within each Stage students will be exposed to general medical practice, both in the community and in hospital and to the specialist care provided in hospital settings. The emphasis for teaching and learning is on patient-centredness, such that students are encouraged to think of medical care from the patients' perspective with implications for patient choice within a national healthcare delivery service. Each Stage of the curriculum is based around a common set of themes which allow integration of a wide range of medical subjects around core principles of healthcare for the individual and for communities.

Curriculum Themes

The curriculum themes fall into three groupings related to medical practice.

1. How the doctor approaches practice:

- Clinical problems
- Core science and pathology
- Clinical decision making and judgement
- Public health
- Ethics and law
- Individual in society
- Chronic disease and disability

2. What the doctor is able to do:

- Clinical and communication skills
- Patient investigation
- Practical procedures
- Therapeutics and patient management
- Learning, teaching, evaluation and research

3. The doctor as professional

- Personal and professional development
- The multi-professional workplace

1 Aims and Outcomes for Curriculum 2005

At the start of the programme there is an **Introductory Course** of three weeks duration. During the Introductory Course students

- have an introduction to the clinical course including an outline of the three year programme, an overview of each of the curriculum themes and advice about the on-line portfolio.
- meet their clinical supervisors and follow a programme of instruction in basic clinical method including fundamentals of communication skills, basic history taking and clinical examination.
- receive an introduction to patient investigation and clinical reasoning.

By the end of **Stage 1, Clinical Method** students will be competent in basic clinical method. They will have met adult patients in hospital and in primary care with a wide range of acute and chronic general medical and surgical problems and will be able to:

- communicate effectively
- 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 **Stage 2, the Life 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 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
- have produced portfolio cases that reflect the presentation of disease throughout life;
- be familiar with issues relating to physical and mental disability in patients of all ages;
- have studied the diagnosis and management of a range of health problems by means of linked attachments in primary and secondary care;
- know about the public health aspects of medicine relating to screening, prevention and population health at different stages of life.

At the end of **Stage 3, Preparation for Practice**, by integrating the curriculum themes in further clinical practice, 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. This will be facilitated by a practical skills exam early in Stage 3. By the end of Stage 3, students will:

- have had experience of clinical or translational research;
- demonstrate their understanding of General Practice as a speciality;
- have acquired the Intermediate Life Support (ILS) Certificate;
- recognise the severity of illness and institute immediate and continuing care to patients of any age group who are acutely and seriously unwell, regardless of the underlying cause;
- demonstrate the appropriate knowledge, skills and attitudes required by the Clinical School and by the General Medical Council to practice as a doctor in the postgraduate Foundation programme.

2 Teaching and Learning

Environment: throughout the course, the emphasis is on learning in clinical settings: at the bedside, in outpatient clinics and in GP surgeries supported by seminars, tutorials and discussion groups. Clinical teaching is organized in firms with additional opportunities to attend specialist outpatient clinics. Most of the 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 including:

- small student group sizes;
- experience of different hospital environments;
- exposure to a different range of patients and ethnic populations;
- building relationships between students and consultants throughout the region, facilitating progression to the pre-registration/foundation period.

Learning methods - supervisions, tutorials and lectures: learning in small groups is important with an average of four - six in a Clinical Supervision group. Firm sizes are also small, between two (regional hospitals) and seven (Addenbrooke's); in Stage 3 there is a maximum of 2 students per firm anywhere. Tutorials in General Practice are given on a one-to-one or one-to-two basis. The majority of clinical teaching is delivered to small groups of students by practising clinicians in all specialities. Students are expected to play an active role in their clinical firm, to follow up a group of patients including watching special investigations or treatment and to present patients on ward rounds and in clinical meetings. Weekly supervisions are organised for small groups of students in Cambridge College groups. During the Clinical Course, one-hour, weekly supervisions take place at the bedside for students based in Cambridge which relate to the appropriate curriculum theme. Supervisions focus on improving clinical skills and reinforcing the lessons of Clinical and Communication Skills. Topic-based tutorials and discussions of ethical problems may also be included. In general during clinical attachments, there are no lectures. Self-directed learning is encouraged; students are given guidance on learning methods in Stage 1 and autonomous learning fostered by the on-line portfolio. Core curriculum learning programmes are available electronically so that the curriculum related to individual clinical attachments can be delivered simultaneously to students in Cambridge or on regional hospital attachments.

Review & Integration (R & I) Weeks: Students are brought together for a series of 11 '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 the year group.

Practical Clinical Skills: opportunities for learning clinical skills are provided in all attachments and reinforced by Clinical Supervisors. A Clinical Skills Unit (CSU) based in Addenbrooke's has responsibility for planning and delivery of an integrated programme of practical clinical skills supported by clinical skills centres and staff in the regional hospitals. The Skills curriculum is delivered simultaneously in Cambridge and the region.

Library and IT Facilities: all Clinical Students register with the Medical Library, which is a branch of the main University Library. It is located on the top two floors of the Clinical School building, and has over 170 study places. The book section contains over 34 000 textbooks, the majority of which may be borrowed. There are about 64 000 periodical volumes, and about 1000 current periodical titles. Self-service photocopying facilities are available.

The Medical Library's Wolfson Technology Resource Centre is a purpose-built, multi-media computer room equipped with networked PC and Macintosh workstations and printers, plus other peripherals such as scanners and Zip drives. These offer a variety of word-processing and other applications, together with World Wide Web and telnet access. There is an extensive range of computerised information services, including end-user access to the Medline, Embase, and Cochrane Library databases. Further computer terminals are located in seminar rooms in the Clinical School and in the Sherwood Room (the student common room) and a number of loan laptops are available through the library. All regional partner NHS Trusts have a requirement for library and IT provision built into their SIFT contractual agreement.

The Clinical and Biomedical Computing Unit (CBCU) manages the Educational Resource Web (ERWeb) which hosts all the academic and administrative material for the curriculum. The online student and programme evaluation system and certain online assessments are part of the ERWeb system.

3 Assessment Methods

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.

All Stages

Assessment occurs at the end of each clinical attachment and may include the result of observation by the multidisciplinary clinical team together with more formal assessments such as Multiple Choice Questions (MCQs) or Mini-Clinical Evaluation Exercises (Mini-CEX's) organised on the firm. The assessment methods for each course component are determined by Deanery team in consultation with Attachment Directors and Theme Co-ordinators; they are explained to students in the Resource Information published on the Web.

Attachment Records: for each Stage of the course, assessment results are recorded in a written report. An Attachment Record for each student is completed at the end of individual attachments by the Attachment Director, regional hospital Undergraduate Specialty Tutor or responsible consultant.

Evaluation criteria are as follows:

Attendance:	Determined for each attachment as appropriate by the Attachment Director and published in the Specialty Resource Pack. Examples of Satisfactory: <ul style="list-style-type: none">• Attends a minimum X Ward Rounds, X Outpatient Clinicals and X Theatre Sessions.• Full participation in all activities; on-call, clinics, ward rounds, teaching.
Overall Performance:	<p>P = Pass: demonstrates interest and a willingness to learn; has a good grasp of core subject knowledge and skills; is organised; works well within the team; behaviour shows appropriate respect for patients.</p> <p>O = Outstanding: <i>in addition to 'S' qualities</i> – demonstrates commitment and enthusiasm and a willingness to do more than expected; responds well and quickly under pressure; exceptional depth and breadth of subject knowledge; behaviour shows a high degree of consideration for patients.</p> <p>B = Borderline: contributes relatively little other than being present on the ward, has only minimal subject knowledge; is poorly organised – does not work well within the team or fails to engage; behaviour towards patients gives cause for concern.</p> <p>F = Fail: Lacks interest and makes no effort to learn, demonstrates very little subject knowledge; is a disruptive member of the team; behaviour suggests unacceptable behaviour towards patients.</p>
Assessment Score:	The score/mark for any end-of-attachment test expressed as a percentage.

Student Selected Component: assessed by SSC supervisors in the way designed by them to be most appropriate to the activity concerned.

Portfolio Assessment: Students' developing portfolios are assessed formatively by Clinical Supervisors and GP Tutors.

Stage Assessments

Stage 1 concludes with the Stage 1 Assessment comprising a multiple choice question paper (MCQ) and an objective structured clinical examination (OSCE) relating to practical, clinical and communication skills. Feedback is provided by the Stage 1 Interview, in which each student is seen, with their Clinical Supervisor, by a member of the Deanery team. The student's performance throughout Stage 1 is reviewed, including results of all their in-course assessments so that feedback can be given and remediation planned if necessary.

OSCE (Objective Structured Clinical Examination): a series of about 20 stations designed to assess skills in three areas: Practical Clinical Skills, Physical Examination Skills; History-taking and Communication Skills.

Knowledge: knowledge of diagnosis, management (particularly therapeutic) and investigations is assessed by a paper of multiple choice questions based on case histories illustrating common clinical problems.

Whilst developed as a formative assessment, students are not allowed to enter the Finals examination until they have satisfactorily completed the Stage 1 assessment.

Stage 2

Final MB

Part I is taken in May/June of year two; Part II is taken in June of year three.

Part I Finals examination in Pathology, Paediatrics and Obstetrics / Gynaecology: at the end of the Life Course, Students take three summative finals examinations: Part I Pathology (see below) and Clinical Objective Structured Clinical Examinations (OSCEs) in Obstetrics & Gynaecology and Paediatrics.

Henry Roy Dean Prize Examination in Pathology: all students sit this examination just prior to the Easter Term sitting of Final MB Part I. Students receive feedback on their performance in relation to their peers.

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 by the Clinical Dean and College Directors of Studies for 'best elective report' award.

Objective Practical Skills Examination (OSPE): about 15 stations to assess a student's practical skills according to the requirements of Tomorrow's Doctors. Having passed the OSPE, students may practise their skills under supervision on their ward - based Stage 3 attachments.

Stage 3

Portfolios: Students' portfolios must be satisfactorily completed before entry into Final MB.

Final MB

Part I is taken in May/June of year two; Part II is taken in June of year three.

Student performance is reported as 'Pass', 'Pass with Merit', 'Pass with Distinction'.

Part I (Pathology)

The examination is concerned with the application to human disease of the principles of pathology. It covers morphological and clinical aspects of pathology, including haematology, microbiology, chemical pathology, epidemiology, and preventive medicine. The examination is in three parts:

Written Examinations:	<i>Marks:</i>	<i>33 % of Part I total</i>
	<i>Length:</i>	<i>2 hours</i>
<i>Multiple Part Objective Questionnaire</i>	<i>Structure :</i>	<i>50 true/false response questions each with five parts & 50 extended matching questions</i>

<i>Essay Questions</i>	<i>Marks:</i>	<i>33 % of Part I total</i>
	<i>Length:</i>	<i>2 hours 20 minutes</i>
	<i>Structure :</i>	<i>7 compulsory questions of equal weight.</i>
		<i>Most questions encompass two or more disciplines in an integrated way, but some are restricted to one discipline.</i>

Practical Examination:	<i>Marks:</i>	<i>33 % of Part I total</i>
	<i>Length:</i>	<i>3 hours</i>
	<i>Structure :</i>	<i>10 compulsory data interpretation questions</i>
		<i>Each question is presented in a folder containing a brief relevant case history with the results of a few appropriate laboratory tests and usually one or two good quality colour photographs of a named macroscopic surgical or post-mortem specimen. For each case there are 4 - 5 sub-questions, brief written answers are required.</i>

**Part I Viva voce
Examination:**

- Marks:* This component does not directly contribute to the total marks for most students:
- it is compulsory for those at risk of failing the examination;
 - students who have achieved a high standard in the written and practical papers will be invited to attend to give them an opportunity for a distinction award.
- Length:* two sessions of approximately 10 - 15 minutes
- Structure* The session may cover all Pathology disciplines.
- :* Each candidate meets two groups of three examiners, at least one is external. Examiners have information about marks for the written and practical papers which they use to gauge the level of enquiry required to help determine pass from fail and pass from distinction.

Part II (Clinical Medicine)

The examination is concerned with the principles and practice of Medicine and Surgery with Clinical Pharmacology and Therapeutics, Obstetrics and Gynaecology, General Practice, Public Health Medicine, Paediatrics, Psychiatry and other medical and surgical specialities (including Anaesthesia, Clinical Oncology, Ophthalmology, and Surgical Anatomy).

The examination is designed to assess the candidate's

- knowledge and experience of Medicine and Surgery in their widest sense (as defined above)
- ability to apply that knowledge and experience to the management of patients
- ability to communicate effectively with patients and to respect their autonomy
- experience of ethical problems in clinical medicine.

Candidates may be asked to interpret radiographs and scans, electrocardiograms, clinical photographs and other clinical data.

Written papers are assessed without knowledge of the candidate's name.

The examination has five components:

Component 1:

Multiple Choice	<i>Length:</i>	3 hours
Test: MCQ	<i>Structure</i>	100 – 150 five-option, single response computer-marked questions testing factual knowledge and its application in a clinical context

Component 2:

Extended Matching	<i>Length:</i>	3 hours
Question: EMQ	<i>Structure</i>	40 computer-marked questions testing application of knowledge and clinical problem-solving skills

Component 3:

Structured Essay	<i>Length:</i>	2 hours
Question: SEQ	<i>Structure</i>	6 – 8 structured short essay questions testing written communication skills in clinical scenarios

Component 4:

Simulated Clinical Encounter	<i>Length:</i>	3 hours
Examination: SCEE	<i>Structure</i>	up to 12, 15-minute stations in history-taking, clinical reasoning and other interpersonal communication skills using simulated patients

Component 5:

Clinical Examination: CE	<i>Length:</i>	3.5 hours
	<i>Structure</i>	a combination of 7.5 and 15-minute stations testing core clinical skills and physical examination skills using real patients

4 Course Content

The clinical course lasts for two years and nine months with two-week holidays in the Winter and Spring and a three-week holiday each summer.

The curriculum timetable is arranged in the major specialities. Within those specialities curricular themes are addressed by collaborative working between groups of specialists to deliver integrated learning objectives. The Core Clinical presentations form the backbone of the clinical core curriculum and are the basis of clinical tutorials throughout the course.

Course content is monitored by a Curriculum Committee to ensure compliance with the requirements of the GMC (Tomorrow's Doctors) and the QAA (Benchmark Statement for Medicine). Students are divided into groups and follow a rotation of teaching blocks with three main Stages and integrated vertical themes as described below.

Standard 2005 Clinical Course Summary

Week	Month	Year 1	Year 2	Year 3
1	September	Introductory course	Specialty Attachment 2: 29 - 35 students per group*	75 students per group*
2				Senior GP, Palliative Care
3	October		GP/Community 29 - 35 students per group	
4		Cambridge Medicine		
5		1 day GP	review / integration 5	75 students per group*
6			Major Adult Diseases: Cardiothoracic	OSPE (summative)
7	November	1 day GP	Infection/GU	Senior Medicine
8		38 students per group*	Oncology essentials	
9		review / integration 1		
10		Regional Medicine		
11	December	1 day GP		
12			Specialty Attachment 3: 29 - 35 students per group*	
13		1 day GP		
14		38 students per group*	review / integration 6	50 students per group*
15		Holiday	Holiday	Holiday
16	January			
17		Regional Surgery	Elderly, Musculoskeletal, Neurosciences	
18		1 day GP		review / integration 10
19				Senior Surgery
20		1 day GP		
21	February	38 students per group*	Specialty Attachment 4: 29 - 35 students per group*	
22		review / integration 2		
23		Cambridge Surgery	Stage 2 SSC B 29 - 35 students per group	
24		1 day GP		
25	March		review / integration 7	
26		1 day GP	Psychiatry	50 students per group*
27		38 students per group*		
28		review / integration 3		Holiday
29		MCQ/OSCE (formative)	Holiday	review / integration 11
30	April	Holiday		Emergency Medicine & Critical Care
31				
32		Stage 1 SSC	Specialty Attachment 5: 29 - 35 students per group*	
33				
34	May		GP/Community 29 - 35 students per group*	
35				
36			review / integration 8	
37		Women's Health	Self-directed Study	
38			Final MB I Path, Clin. Paed., O&G	50 students per group*
39	June		Year 2 SSC	Self-directed Study
40			Elective	Final MB Part II
41		Specialty Attachment 1: 29 - 35 students per group*		
42				PRHO Shadowing
43	July	Stage 2 SSC A 29 - 35 students per group		Holiday
44				
45		review / integration 4		
46		Holiday	Holiday	

47	August			PRHO 1
48				
49		Growth / Development	review / integration 9	
50		Childhood illness	Cambridge Specials SSC	
51	September			
52				
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Themes

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 course. The Curriculum 2005 themes relate to the requirements of the General Medical Council for curriculum content.

GMC- CURRICULAR CONTENT	2005 THEMES
Scientific basis of medicine Knowledge and understanding of the clinical and basic sciences Knowledge and understanding of normal and abnormal structure and function Understanding of scientific methods, including both technical and ethical principles	Core science/ Pathology Clinical problems
Treatment Evaluating effectiveness of treatment Taking account of patients' views Effective & safe use of medicines (side effects, interactions, antibiotic resistance, genetic factors) Surgery and peri-operative care Recognising and managing acute illness Care of chronic, and recurrent illness Care of patients with mental or physical disability Rehabilitation and care in institutions and in the community Relieving pain and distress Palliative care Role of lifestyle and diet Role of complementary therapy	Therapeutics and Patient Management
Clinical and practical skills Perform and interpret history, examination, mental state examination Interpret common investigations Clinical decision making Assess patients' problems and form management plans involving patients in the process Work out drug dosage and write prescriptions Perform a range of practical skills including CPR (see GMC list)	Clinical and communicati on skills Clinical decision- making and judgement Patient Investigation
Communication skills Communicate with patients, relatives and colleagues from various disciplines Appreciate existence of deaf-blind / sign communication Have a range of specific communication skills (See GMC list)	Practical procedures
Teaching skills Appreciate principles of education, familiarity with range of teaching and learning techniques, recognize obligation to teach, appreciate place of audit and appraisal to assess learning needs Able to identify own learning needs Able to record and present information using different techniques Able to use and evaluate various teaching techniques	Learning, teaching, evaluation and research
General skills Manage time and prioritise Reflect on practice, be self-critical and perform audit Use research skills to influence their practice Manage risk when practising Solve problems Analyse and use numerical data Use principles of medical ethics	Personal and Professional Development
The working environment Understand the working, organizational and economic framework of medical practice in the UK Understand current developments and principles of the NHS e.g. patient-centredness, clinical governance, audit, health & safety, risk assessment, risk management, multi-professional team working	The multi- professional workplace

Medico-legal and ethical issues Protect patients' rights Confidentiality End of life / vulnerable patient issues Response to complaints Respond to performance, conduct or health issues in colleagues Consider the reality of finite resources Consent	Ethics and Law
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GMC- CURRICULAR CONTENT	2005 THEMES
Disability and rehabilitation Rights of people with disabilities How society's view affects opportunities for people with disabilities Potential contribution of people with disabilities	Chronic Disease and Disability
Responses to illness Importance regarding recovery, chronic disease and impairment / disability / handicap, including needs of parents with disabled children	
Public health Assessing community needs Genetic, environmental and social factors in illness and disease Principles of health promotion, including surveillance and screening	Public Health
Individual in society Understand social and cultural environment, including psychology and sociology Understand about differing social and cultural values and avoid prejudice Take account of patients' understanding and experience, especially those who are vulnerable Explore patients' fears and concerns and involve them in decisions about their treatment.	Individual in Society

Course content - Introductory Course – 3 weeks

Students spend three weeks at Addenbrooke's on the Introductory Course. They meet their Clinical Supervisors who will support them as a member of a small, stable group, throughout the clinical course.

Stage 1 - Basic Skills and Knowledge – 6 months

Stage 1 objectives are achieved by integration of curriculum themes with clinical material. Students are supported in moving into the clinical environment and towards self-directed, experiential learning. They begin their personal and professional development through exploration of ethical dilemmas, through examining students' own attitudes and values and via an appreciation of the patients' perspective of illness.

Medicine and Surgery Attachments – 4 x 5 weeks: Students are attached to medical or surgical firms either at Addenbrooke's or at one of five regional hospitals (Bedford, Hinchingsbrooke, Ipswich, Kings Lynn or Peterborough). Each student rotates through Cambridge Medicine / Cambridge Surgery / Regional Medicine / Regional Surgery. Students go to the same hospital for both regional attachments. During these attachments, students will have experience of general medicine, general surgery and an introduction to emergency medicine and critical care.

Seminar programme: during medicine and surgery attachments, in the mornings students focus on clinical work and are encouraged to clerk patients and follow them up, including attending appropriate investigations. In the afternoons, there is a seminar programme for the entire student cohort, enabling all students to cover the same topic area week by week. Seminars are integrated between different specialties and combine to address all curricular themes. Distance learning materials replace some seminar teaching for students on Regional attachments.

Primary Care – 8 days: groups of four students are attached to two general practices: one close to Addenbrooke's and one close to their Regional teaching hospital. During each five week attachment, students spend two days in their local host practice, seeing patients with conditions relevant to that week's topic area and seeing patients in opportunistic surgeries.

Review and Integration Weeks 1 -3: Pathology teaching occupies approximately 2.5 days of each of these weeks. Three other courses will start in weeks 1 - 3 and run through the R & I programme to the end of Stage 3. "Frontiers in Medicine" will showcase the excellent translational and clinical research being undertaken on the Addenbrooke's campus by members of the Clinical School and partner research organisations. There is a series of guest lectures around the subject of "Humanities in Medicine", with invited speakers from the wider University setting and beyond. "The Patient's Voice" enables a set of expert patients to meet the students and discuss their experiences of the health service and their illness.

Stage 1 Portfolio: Students develop a portfolio based on patients that they have seen including case write-ups and pieces relating to the various curricular themes.

Clinical Student Selected Components (SSC) – 1-2 Weeks: After their final Medical / Surgical Attachment, students are encouraged to identify areas in which they feel less capable and choose from a menu of suitable clinical activities to address this.

Stage 1 Student Selected Component (SSC) – 3-4 Weeks: an activity chosen from a menu offered by the Clinical School.

Stage 2 – 15 months

Life Course – 12 months: comprises five x 8-week attachments based on the stages of human lifespan:

- Growth, development and childhood illness
- Women's health
- Major adult diseases (cardio-thoracic medicine, oncology and infectious disease)
- Musculoskeletal and neurological illness; diseases of the elderly
- Psychiatry

Two of the attachments include a two-week general practice component; two will include a two-week student-selected component based in the community

In each Stage 2 attachment students will be attached to a relevant specialist hospital firm with coordinated input from other specialists representing the curricular themes.

Primary Care in Stage 2 – 2 x two weeks: Students spend the last two weeks of two of the Life Course attachments ("Growth, development and childhood illness" and "Psychiatry") in General Practice. Where feasible, Students are allocated to one of the two practices they visited during Stage 1. During one two-week attachment, Students focus on Growth, Development / Childhood Illness and Women's' Health. During the other, they focus on Psychiatry and Chronic Disease / Handicap. They see patients, gather data for later presentation and work with allied health professionals. At the end of these periods, students present coursework involving written work or assessed presentations.

Student Selected Components (SSC) – A and B: during the last two weeks of a further two of the Life Course attachments ("Women's Health" and "Musculoskeletal and Neurological Illness; Diseases of the Elderly"), Students have the opportunity of undertaking student selected components to further explore any of the areas covered in the life course with an emphasis on community care

Review and Integration Weeks 4-8: all students meet the same material, irrespective of the area of life that their previous attachment addressed. Pathology teaching occupies approximately 1.5 days of each of each week. The "Frontiers in Medicine", and "Humanities in Medicine" and "Patients' Voice" courses continue.

Portfolio: Students will continue to assemble their portfolio based on patients that they have seen. This includes case write-ups and pieces relating to the various curricular themes. In particular, students identify patients with different cancers and with cardiovascular disease to form the basis of the reflective portfolio.

SSC/Elective - 7 weeks: Stage 2 concludes with the Elective which is an opportunity for students to exercise initiative and responsibility in organising a clinical or scientific elective of their own choice. Although some students choose to spend the seven weeks in a particular department within the Clinical School, most leave Cambridge for their elective, with about 90 % going abroad.

Stage 3: Preparation for Practice - 10 months

Students continue to develop their clinical, practical skills and communication skills. The focus of the final year is on equipping students with the knowledge, skills and attitudes that will allow them to practise independently. Stage 3 includes attachments in Medicine and Surgery when students' experience and confidence enables them to play a greater part in patient care; either the Medicine or Surgery attachment is in Cambridge; the other in an East Anglian regional hospital.

Student Selected Component (SSC) – “Cambridge Specials” – 4 Weeks: Students have access to translational and clinical research facilities and the other tertiary clinical centres for which Cambridge has a reputation world wide.

Primary Care – 4 Weeks: Students are attached in pairs to a practice that they have not attended earlier in the course. They see patients 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.

Senior Medicine and Surgery – 2 x 9 Weeks: Students are attached to medical and surgical teams around the region, either singly or in pairs. 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. They prescribe using student prescription sheets which are inspected by the clinical team and form part of their portfolio of learning.

Emergency Medicine and Acute Care – 9 Weeks: Students learn about the practicalities of assessing and managing patients with serious, acute and life - threatening illness across all specialties, to ensure that they are both competent and confident in this area before qualification.

Review and Integration Weeks 9-11: Review and integration programmes continue, the focus in Stage 3 being on clinical management and all aspects of professionalism. The “Frontiers in Medicine”, Patient’s Voice and “Humanities in Medicine” courses continue.

Portfolio: Students complete their portfolio based on patients that they have seen including case write-ups and pieces relating to the various curricular themes.

Longitudinal Student Selected Component: during their final year medical and surgical attachments, students undertake a longitudinal SSC, studying a chosen area in depth on a weekly basis throughout the year.

Post Final MB

Pre-registration/Foundation Post Shadowing (1 week): students shadow the doctor in their first post-qualification post. Objectives of the week include: gaining insight into the organizational and operational problems to be faced as a newly-qualified doctor; improving clinical skills; obtaining direct experience of some of the practical procedures required and gaining experience of working in a multidisciplinary team.

Pre-registration/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 a combination of approved posts.

The University is responsible for certifying to the GMC that its graduates have satisfactorily completed their pre-registration training and requires certificates of service from employing authorities. Recruitment is by open competition and Cambridge graduates are likely to secure a post in the East Anglian region which meets their requirements.

Transferable Skills – Throughout the Course

<i>Skill:</i>	<i>Experienced and developed in:</i>
Intellectual, Learning how to learn Teaching and Mentoring Problem-solving	<p>Lectures, Seminars, Final MB preparation</p> <p>Emphasis on experiential learning with appropriate support. Clinical Supervisions develop the ability to solve clinical problems.</p> <p>Principles of reflective practice and lifelong learning are encouraged at all stages of the Course.</p> <p>Senior Clinical students act as Associate Clinical Supervisors during the Introductory Course – helping to teach basic skills and mentoring the new students.</p>
Communication	<p>Listening and talking to patients, developed in the Clinical and Communication Skills strand.</p> <p>Participation in small group Clinical Supervisions.</p> <p>Written reports: students are required to produce several illustrated written reports including case commentaries (e.g. Portfolios), prize entries, elective report, Public Health project.</p> <p>Oral presentation: in several attachments, individual and groups of students give presentations - providing a learning experience in oral communication and in the use of visual aids such as overheads and Powerpoint.</p> <p>A non-scientific recommended reading list is published to encourage literacy skills.</p>
Organisational	<p>Attachment arrangements, particularly travel to regional hospitals and rural General Practices.</p> <p>Managing workload: time management, self-direction, self-discipline, working to deadlines.</p> <p>Health and Safety, risk management sessions.</p> <p>Organising supervisions and Pre-registration House Officer (junior doctor) shadowing.</p> <p>Organisation of 7-week Elective, usually abroad.</p>
Personal Effectiveness	<p>Small College community enhances ability to interact comfortably with a wide range of people/cultures/disciplines and encourages flexibility and adaptability.</p> <p>The Personal and Professional development theme develops self-awareness and open-mindedness.</p> <p>Setting of priorities, effective time management, self-discipline, self-reliance, motivation, thoroughness are essential qualities for successful completion of the course.</p>
Team-work and Networking	<p>Throughout the course, students work together in small supervision groups.</p> <p>Presentations are prepared and delivered by small groups during attachments, students learn how to organise division of labour and co-ordinate information into a timed, cohesive and logical way.</p> <p>Team-building, role of a medical practitioner within a health-care team developed in multi-professional clinical environment experienced in clinical attachments.</p> <p>Students also organise sporting events and an annual pantomime - all students are encouraged to participate when they are in Cambridge.</p>
Research	<p>Use of Medical Library – bibliographic skills.</p> <p>Research-based SSCs especially in the Cambridge Specials block; Elective research projects.</p> <p>Evidence-based practice (audit) in all aspects health-care, knowledge of recent developments.</p> <p>Study of topics in depth encouraged by the award of prizes and project work, e.g. in Public Health.</p>

Legal and Ethical Skills	Issues of consent, confidentiality/Data Protection Act covered in Clinical and Communication Skills and Medical Ethics and Law
Numeracy	Data-handling in research and project work; prescribing; Public Health/Epidemiology.
Computer Literacy	Use of College and Clinical School computing facilities for retrieval, management and manipulation of information including: E-mail; Word-processing; Web access to on-line learning e.g. ERWeb; Electronic Literature Searching e.g. Medline.
Foreign Language Skills	Over 80 % of students spend their 7-week elective abroad, many in non-English speaking environment. The University provides students with support for tuition in foreign languages: http://www.langcen.cam.ac.uk/ or http://www.multikultura.org.uk/ .
Practical Skills	Specific practical skills for medicine are intrinsic to the course. Several clinical attachments include a range of practical clinical/life skills from acquiring an understanding of the care needs of the elderly to washing, feeding and changing babies.
Health and Safety at Work First Aid	All activity within a hospital environment in which students spend the majority of their time is subject to strict codes of practice.
Career Management	The Clinical Courses provide experience in a wide range of hospital and community specialties. Each student receives personal career counselling and guidance in CV preparation.

5 Progression Requirements

The current MB, BChir completion rate is nearly 100 % with most students passing at first attempt. There are usually no more than one or two withdrawals each year.

Course assessments do not contribute directly to the Final MB mark but satisfactory completion is a pre-requisite for admission to the Final MB examinations.

Failing an attachment may result in a student having to gain more experience in the subject, possibly during the Elective period, or deferment of Final MB at the discretion of the Clinical Dean in discussion with the Attachment Director.

Attachment Records: as well as reporting student assessment results, the records are used to:

- monitor student attendance and performance - information is entered on individual student computer records;
- identify students with specific problems as early as possible;
- monitor the quality of education provided.

Student Performance Report: a summary of the Attachment Record grades is produced in the form of a 'Student Performance Report' at various stages during the course:

- for any student who has a consistently poor record in any area: these students will be asked to discuss their progress with the Clinical Dean;
- at the end of Stage 1;
- in December of Stage 2;
- towards the end of Stage 3.

Stage 1 Assessment Performance: Each student meets with the Clinical Dean/Associate Clinical Dean and Clinical Supervisor for discussion of their portfolio of cases and the results of the assessment. The written paper results are expressed as a point in the histogram of overall results (so that the mark may be peer compared). The student is made aware of his/her progress; problems are identified by student, Clinical Dean or Clinical Supervisor; and addressed by discussion of an "educational prescription".

Stage 2 Performance: Clinical Supervisors distribute the Performance Report to the students in their group and discuss any concerns about progress; the Stage 2 OSPE results are circulated by E-mail, a member of the Clinical Deanery team holds individual discussions with students whose performance is unsatisfactory.

Stage 3 Performance: towards the end of Stage 3, an appointment with a Dean or senior member of the teaching staff is made for each student to discuss performance and career plans. Students with major problems will have already been identified and seen by the Clinical Dean – in exceptional circumstances e.g. where students have failed the Stage 2 practical clinical skills assessment, a formal warning of withdrawal of permission to sit Final MB may be issued.

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

College Reports: at the end of each University Term, college Personal Tutors may invite their students to complete a self-assessment form and offer them an opportunity to review their term's Supervision reports and progress.

Final MB Examinations: students may ask their college tutor for mark breakdowns – these are circulated by the Board of Examinations to College Tutorial Offices at the end of each examination period.