



Keele University

School of Medicine

MBChB Honours Degree

Programme Specification

2012

This programme specification gives an overview of the MBChB curriculum, and details of Year 1, 2, 3, 4 and 5 . The full programme was approved by the General Medical Council and Keele University in December 2011

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Introduction

The programme specification is the definitive document summarising the structure and content of the medical programme. It is reviewed and updated every year. This document aims to clarify to students what to expect from the medical programme.

Name of programme: **MBChB Honours Degree**

Name of award: **MBChB Honours Degree**

Mode of study – full time or part time: **Full time**

Single Honours

Duration of programme: **4 or 5 Years**

Recognised by (If appropriate): **General Medical Council (GMC)**

The programme meets the requirements of the General Medical Council, the Quality Assurance Agency [QAA] and the Framework for Higher Education Qualifications in England, Wales and Northern Ireland [2008].

As part of the HEFCE Wider Information Set (WIS) requirements, we provide a table detailing the External Examiner and their home institution by programme. The table also provides the last examiners report and the school response to that report. The report and response are only available to internal users (with Keele University login and password).

<http://www.keele.ac.uk/qa/externalexaminers/reportsandresponses/ug>

Medicine at Keele

Keele Medical School has 650 students across the five academic years. Although small we offer those aspiring to be doctors:

- * excellent clinical opportunities in primary care and hospital settings across Staffordshire and Shropshire;
- * excellent new teaching facilities at all teaching sites;
- * a large group of trained and experienced teachers;
- * an enjoyable, interactive, small group based learning approach;
- * opportunities for student selected components in a wide range of biomedical, behavioural and social science topics;
- * a strong student support system; and
- * a beautiful rural location, conveniently located in central England.

Our mission:

To graduate excellent clinicians

The Philosophy of the Programme

Doctors need to update and develop their skills, knowledge and behaviours throughout their working lives. The programme at Keele emphasises their responsibility for learning what they need to know. Learning is student-led to prepare them for their careers.

The programme aims are to support:

The doctor as Scholar and Scientist: the acquisition of knowledge and understanding of: health; health promotion; and the management and prevention of disease, in the context of the individual, families, and society

The doctor as Practitioner: the acquisition of and proficiency in essential skills needed in clinical practice, for example, obtaining a patient's history, undertaking a comprehensive physical and mental state examination and interpreting the findings and formulating a management plan.

The doctor as Professional: the acquisition and demonstration of appropriate attitudes for high quality medical practice, in relation to both interpersonal relationships; personal development; and the care of individuals, their families, and others.

Keele Graduate Attributes

Engagement with this programme will enable you to develop your intellectual, personal and professional capabilities. At Keele, we call these our ten Graduate Attributes and they include independent thinking, synthesizing information, creative problem solving, communicating clearly, and appreciating the social, environmental and global implications of your studies and activities. Our educational programme and learning environment is designed to help you to become a well-rounded graduate who is capable of making a positive and valued contribution in a complex and rapidly changing world, whichever spheres of life you engage in after your studies are completed.

Please refer to the programme webpages for a statement of how you can achieve the Keele Graduate Attributes through full engagement in the programme and other educational opportunities at Keele.

Objectives

The MBCChB Honours Degree at Keele University is designed to ensure graduates meet the necessary standards in terms of knowledge, skills and professionalism that new doctors should have as they embark on further training. The curricular outcomes for undergraduate medical education are set out in *Tomorrow's Doctors* (GMC, 2009) (see http://www.gmc-uk.org/med_ed/tomdoc.htm), and the duties of a doctor as set out in the GMC document *Good Medical Practice* (GMC, 2009). These are:

- Good clinical care - Doctors must practise good standards of clinical care, practise within the limits of their competence, and make sure that patients are not put at unnecessary risk.
- Maintaining good medical practice - Doctors must keep up to date with developments in their field and maintain their skills.
- Relationships with patients - Doctors must develop and maintain successful relationships with their patients.
- Working with colleagues - Doctors must work effectively with colleagues (from all health and social care professions).
- Teaching and training - If doctors have teaching responsibilities, they must develop the skills, professionalism and practices of a competent teacher.
- Probity - Doctors must be honest.
- Health - Doctors must not allow their own health or condition to put patients and others at risk.

The programme is an innovative, highly integrated, modern medical curriculum, which includes Problem Based Learning and a mixture of core, systems-based Years together with student-selected components. The distinctiveness and design of the course allow diversity and integration:

Diversity is intended to mean allowing students with different personalities, aspirations, preferences, learning styles and strengths and weaknesses to be successful, to enjoy their undergraduate time, and to be able to build on these experiences during postgraduate training. It is recognised that career options for doctors have never been greater, and although the School's primary aim is to deliver competent Foundation Year trainees, the course should allow students to experience more specialised activity by recognising and developing natural aptitudes. This can be realised through the flexibility of the student-selected components and final year electives. These have well-defined intended learning outcomes related to competencies, while allowing for maximum variety of choice in terms of activity and learning environment. For example, students with a particular interest can follow a 'pathway' that concentrates on research; community practice; or a particular speciality; or students can focus on breadth and general experience. Undergraduates may suspend their medical degree for a period of 12 months to undertake either a BSc degree after Year 2 or Year 4 or a Masters degree after Year 4.

Integration: For example, interprofessional learning within the course with other undergraduate disciplines across the Faculty of Health, Keele University. The structure, timetabling and philosophy of the course make this exceptional level of integration possible.

Integration occurs at all levels, and there are five vertical themes included in the core and selected elements in all years. The five themes are:

Vertical themes:

- Scientific basis of medicine (SB)
- Clinical, communication and information management skills (CCI)
- Individual, community, and population health (ICP)
- Ethics, personal & professional development (EPPD)
- Quality and efficiency in health care (QE)

Theme weighting by Year

Year	SB	CCI	ICP	EPPD	QE
1	55	15	15	10	5
2	45	25	15	10	5
3	30	35	15	10	10
4	20	45	15	10	10
5	15	50	10	10	15
Overall	33	34	15	10	8

What students will learn

Intended learning outcomes

The curricular outcomes of Tomorrow's Doctors (GMC, 2009) form the learning outcomes of the programme thus ensuring that graduates meet the requirements the GMC. Additionally, the Intended Learning Outcomes take account of the Quality Assurance Agency (QAA, 2002) Subject Benchmark Statements Academic Standards - Medicine:

<http://www.qaa.ac.uk/academicinfrastructure/benchmark/honours/medicine.asp>

NB Tomorrow's Doctors 2009 has 124 outcomes and standards that define undergraduate medical education:

TD 2009 Points 1-7 outlines the different and complementary roles in medical education and therefore are indicative of responsibilities only.

TD 2009 Outcomes 8-23 demonstrates in which Year the student will achieve each of the learning outcomes (student learning outcomes). See below

TD 2009 Points 24-174 are the professional standards that the school is required to comply with, with respect to teaching, learning and assessment. The GMC require an annual self assessment document (MSAR- Medical School Annual Return) from the school demonstrating compliance for each of the points.

Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 outcomes 1 The doctor as a scientist and scholar At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
8	Apply to medical practice biomedical scientific principles, method and knowledge relating to: anatomy, biochemistry, cell biology, genetics, immunology, microbiology, molecular biology, nutrition, pathology, pharmacology and physiology.		
8A	Explain normal human structure and functions.	1-4	2
8B	Explain the scientific bases for common disease presentations.	1-4	4
8C	Justify the selection of appropriate investigations for common clinical cases.	3-5	5
8D	Explain the fundamental principles underlying such investigative techniques.	1-5	4
8E	Select appropriate forms of management for common diseases, and ways of preventing common diseases, and explain their modes of action and their risks from first principles.	3-5	5
8F	Demonstrate knowledge of drug actions: therapeutics and pharmacokinetics; drug side effects and interactions, including for multiple treatments, long-term conditions and non-prescribed medication; and also including effects on the population, such as the spread of antibiotic resistance.	1-5	5
8G	Make accurate observations of clinical phenomena and appropriate critical analysis of clinical data.	1-5	5

Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 outcomes 1 The doctor as a scientist and scholar At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
9	Apply psychological principles, method and knowledge to medical practice.		
9A	Explain normal human behaviour at an individual level.	1-3	2
9B	Discuss psychological concepts of health, illness and disease.	1-3	2
9C	Apply theoretical frameworks of psychology to explain the varied responses of individuals, groups and societies to disease.	1-3	3
9D	Explain psychological factors that contribute to illness, the course of the disease and the success of treatment.	1-5	5
9E	Discuss psychological aspects of behavioural change and treatment compliance.	1-5	4
9F	Discuss adaptation to major life changes, such as bereavement. Compare and contrast the abnormal adjustments that might occur in these situations.	1-4	4
9G	Identify appropriate strategies for managing patients with dependence issues and other demonstrations of self-harm.	1-5	5
10	Apply social science principles, method and knowledge to medical practice.		
10A	Explain normal human behaviour at a societal level.	1-2	2
10B	Discuss sociological concepts of health, illness and disease.	1-3	3

Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 outcomes 1 The doctor as a scientist and scholar At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
10C	Apply theoretical frameworks of sociology to explain the varied responses of individuals, groups and societies to disease.	1-2	2
10D	Explain sociological factors that contribute to illness, the course of the disease and the success of treatment □ including issues relating to health inequalities, the links between occupation and health and the effects of poverty and affluence.	1-3	3
10E	Discuss sociological aspects of behavioural change and treatment compliance	1-2	3
11	Apply to medical practice the principles, method and knowledge of population health and the improvement of health and health care.		
11A	Discuss basic principles of health improvement, including the wider determinants of health, health inequalities, health risks and disease surveillance.	1-3	3
11B	Assess how health behaviours and outcomes are affected by the diversity of the patient population.	1-2	2
11C	Describe measurement methods relevant to the improvement of clinical effectiveness and care.	1,3	3
11D	Discuss the principles underlying the development of health and health service policy, including issues relating to health economics and equity, and clinical guidelines.	1,3	3
11E	Explain and apply the basic principles of communicable disease control in hospital	1-5	5

	and community settings.		
Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 outcomes 1 The doctor as a scientist and scholar At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
11F	Evaluate and apply epidemiological data in managing healthcare for the individual and the community.	1,3	3
11G	Recognise the role of environmental and occupational hazards in ill-health and discuss ways to mitigate their effects.	3	3
11H	Discuss the role of nutrition in health.	1-4	4
11I	Discuss the principles and application of primary, secondary and tertiary prevention of disease	1-5	3
11J	Discuss from a global perspective the determinants of health and disease and variations in health care delivery and medical practice.	1,3	3
12	Apply scientific method and approaches to medical research.		
12A	Critically appraise the results of relevant diagnostic, prognostic and treatment trials and other qualitative and quantitative studies as reported in the medical and scientific literature.	1-3	3
12B	Formulate simple relevant research questions in biomedical science, psychosocial science or population science, and design appropriate studies or experiments to address the questions.	3	3
12C	Apply findings from the literature to answer questions raised by specific clinical problems.	1- 5	3
12D	Understand the ethical and governance issues involved in medical research.	3	3

Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 Outcomes 2 - The doctor as a practitioner (TD 2003 11 - 27) outcomes 1 At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
13	Carry out a consultation with a patient.		
13A	Take and record a patient's medical history, including family and social history, talking to relatives or other carers where appropriate.	1-5	5
13B	Elicit patients' questions, their understanding of their condition and treatment options, and their views, concerns, values and preferences	1-5	5
13C	Perform a full physical examination.	1-5	5
13D	Perform a mental-state examination.	3-5	5
13E	Assess a patient's capacity to make a particular decision in accordance with legal requirements and the GMC's guidance (in Consent: Patients and doctors making decisions together).	2-5	5
13F	Determine the extent to which patients want to be involved in decision-making about their care and treatment.	3-5	5
13G	Provide explanation, advice, reassurance and support.	2-5	5
14	Diagnose and manage clinical presentations.		
14A	Interpret findings from the history, physical examination and mental-state examination, appreciating the importance of clinical, psychological, spiritual, religious, social and cultural factors.	2-5	5
14B	Make an initial assessment of a patient's problems and a differential diagnosis. Understand the processes by which doctors make and test a differential diagnosis.	3-5	5

Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 Outcomes 2 - The doctor as a practitioner (TD 2003 11 - 27) At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
14 C	Formulate a plan of investigation in partnership with the patient, obtaining informed consent as an essential part of this process.	3-5	5
14D	Interpret the results of investigations, including growth charts, x-rays and the results of the diagnostic procedures in Appendix 1.	3-5	5
14E	Synthesise a full assessment of the patient's problems and define the likely diagnosis or diagnoses.	3-5	5
14F	Make clinical judgements and decisions, based on the available evidence, in conjunction with colleagues and as appropriate for the graduate's level of training and experience. This may include situations of uncertainty.	3-5	5
14G	Formulate a plan for treatment, management and discharge, according to established principles and best evidence, in partnership with the patient, their carers, and other health professionals as appropriate. Respond to patients' concerns and preferences, obtain informed consent, and respect the rights of patients to reach decisions with their doctor about their treatment and care and to refuse or limit treatment.	4,5	5
14H	Support patients in caring for themselves.	4-5	5
14 I	Identify the signs that suggest children or other vulnerable people may be suffering from abuse or neglect and know what action to take to safeguard their welfare.	3-4	4

Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 Outcomes 2 - The doctor as a practitioner (TD 2003 11 - 27) At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
14J	Contribute to the care of patients and their families at the end of life, including management of symptoms, practical issues of law and certification, and effective communication and team working.	1-5	5
15	Communicate effectively with patients and colleagues in a medical context.		
15A	Communicate clearly, sensitively and effectively with patients, their relatives or other carers, and colleagues from the medical and other professions, by listening, sharing and responding.	1-5	5
15B	Communicate clearly, sensitively and effectively with individuals and groups regardless of their age, social, cultural or ethnic backgrounds or their disabilities, including when English is not the patient's first language.	1-5	5
15C	Communicate by spoken, written and electronic methods (including medical records), and be aware of other methods of communication used by patients. Appreciate the significance of non-verbal communication in the medical consultation.	1-5	5
15D	Communicate appropriately in difficult circumstances, such as breaking bad news, and when discussing sensitive issues, such as alcohol consumption, smoking or obesity.	1-5	5
15E	Communicate appropriately with difficult or violent patients.	1,3,4	5

Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 Outcomes 2 - The doctor as a practitioner (TD 2003 11 - 27) At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
15F	Communicate appropriately with people with mental illness.	3-5	5
15H	Communicate effectively in various roles, for example as patient advocate, teacher, manager or improvement leader.	4-5	5
16	Provide immediate care in medical emergencies.		
16A	Assess and recognise the severity of a clinical presentation and a need for immediate emergency care.	1-5	5
16B	Diagnose and manage acute medical emergencies.	1-5	5
16C	Provide basic first aid.	2	2
16D	Provide immediate life support.	1-5	5
16E	Provide cardio-pulmonary resuscitation or direct other team members to carry out resuscitation.	1-5	5
17	Prescribe drugs safely, effectively and economically.		
17A	Establish an accurate drug history, covering both prescribed and other medication.	2-5	5
17B	Plan appropriate drug therapy for common indications, including pain and distress.	3-5	5
17C	Provide a safe and legal prescription.	4-5	5
17D	Calculate appropriate drug doses and record the outcome accurately.	2-5	5
17E	Provide patients with appropriate information about their medicines.	3-5	5

Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 Outcomes 2 - The doctor as a practitioner (TD 2003 11 - 27) At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
17F	Access reliable information about medicines.	3-5	5
17G	Detect and report adverse drug reactions.	3-5	5
17H	Demonstrate awareness that many patients use complementary and alternative therapies, and awareness of the existence and range of these therapies, why patients use them, and how this might affect other types of treatment that patients are receiving.	2	2
18	Carry out practical procedures safely and effectively.		
18A	(a) Be able to perform a range of diagnostic procedures, as listed in Appendix 1 and measure and record the findings.	See below	5
18B	(b) Be able to perform a range of therapeutic procedures, as listed in Appendix 1.	See below	5
18C	(c) Be able to demonstrate correct practice in general aspects of practical procedures, as listed in Appendix 1	See below	5
19	Use information effectively in a medical context.		
19A	Keep accurate, legible and complete clinical records.	3-5	5
19B	Make effective use of computers and other information systems, including storing and retrieving information.	1-5	5
19C	Keep to the requirements of confidentiality and data protection legislation and codes of practice in all dealings with information.	1-5	5
19D	Access information sources and use the information in relation to patient care, health promotion, advice and information to	1,3-5	5

	patients, and research and education.		
Tomorrow's doctors 2009	<p>Knowledge and understanding, skills and other attributes</p> <p>TD2009 Outcomes 2 - The doctor as a practitioner (TD 2003 11 - 27)</p> <p>At the end of the programme students should:</p>	Occurs in Year:	Assessed at graduate level by completion of Year:
19E	Apply the principles, method and knowledge of health informatics to medical practice.	1-5	5
Tomorrow's doctors 2009	<p>Knowledge and understanding, skills and other attributes</p> <p>TD2009 Outcomes 3 - The doctor as a professional</p> <p>At the end of the programme students should:</p>	Occurs in Year:	Assessed at graduate level by completion of Year:
20	Behave according to ethical and legal principles.		
20A	Know about and keep to the GMC's ethical guidance and standards including Good Medical Practice, the 'Duties of a doctor registered with the GMC' and supplementary ethical guidance which describe what is expected of all doctors registered with the GMC.	1-5	All years
20B	Demonstrate awareness of the clinical responsibilities and role of the doctor, making the care of the patient the first concern. Recognise the principles of patient-centred care, including self-care, and deal with patients' healthcare needs in consultation with them and, where appropriate, their relatives or carers.	1-5	All years
20C	Be polite, considerate, trustworthy and honest, act with integrity, maintain confidentiality, respect patients' dignity and privacy, and understand the importance of appropriate consent.	1-5	All years

Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 Outcomes 3 - The doctor as a professional At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
20D	Respect all patients, colleagues and others regardless of their age, colour, culture, disability, ethnic or national origin, gender, lifestyle, marital or parental status, race, religion or beliefs, sex, sexual orientation, or social or economic status. Respect patients' right to hold religious or other beliefs, and take these into account when relevant to treatment options.	1-5	All years
20E	Recognise the rights and the equal value of all people and how opportunities for some people may be restricted by others' perceptions.	1-5	All years
20F	Understand and accept the legal, moral and ethical responsibilities involved in protecting and promoting the health of individual patients, their dependants and the public □ including vulnerable groups such as children, older people, people with learning disabilities and people with mental illnesses.	1-5	Attributes are monitored throughout the programme
20G	Demonstrate knowledge of laws, and systems of professional regulation through the GMC and others, relevant to medical practice, including the ability to complete relevant certificates and legal documents and liaise with the coroner or procurator fiscal where appropriate.	1-5	5
21	Reflect, learn and teach others.		
21A	Acquire, assess, apply and integrate new knowledge, learn to adapt to changing circumstances and ensure that patients receive the highest level of professional care.	1-5	Attributes are monitored throughout the programme

Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 Outcomes 3 - The doctor as a professional At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
21	Establish the foundations for lifelong learning and continuing professional development, including a professional development portfolio containing reflections, achievements and learning needs.	1-5	Attributes are monitored throughout the programme
21C	Continually and systematically reflect on practice and, whenever necessary, translate that reflection into action, using improvement techniques and audit appropriately □ for example, by critically appraising the prescribing of others.	1-5	Attributes are monitored throughout the programme
21D	Manage time and prioritise tasks, and work autonomously when necessary and appropriate.	1-5	Attributes are monitored throughout the programme
21E	Recognise own personal and professional limits and seek help from colleagues and supervisors when necessary.	1-5	Attributes are monitored throughout the programme
21F	Function effectively as a mentor and teacher including contributing to the appraisal, assessment and review of colleagues, giving effective feedback, and taking advantage of opportunities to develop these skills.	1-5	Attributes are monitored throughout the programme
22	Learn and work effectively within a multi-professional team.		
22A	Understand and respect the roles and expertise of health and social care professionals in the context of working and learning as a multi-professional team.	1-5	5
22B	Understand the contribution that effective interdisciplinary team working makes to the	1-5	5

	delivery of safe and high-quality care.		
Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 Outcomes 3 - The doctor as a professional At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
22C	Work with colleagues in ways that best serve the interests of patients, passing on information and handing over care, demonstrating flexibility, adaptability and a problem-solving approach.	3-5	5
22D	Demonstrate ability to build team capacity and positive working relationships and undertake various team roles including leadership and the ability to accept leadership by others.	5	5
23	Protect patients and improve care.		
23A	Place patients' needs and safety at the centre of the care process.	1-5	Integral to all aspects of the course
23B	Deal effectively with uncertainty and change.	3-5	5
23C	Understand the framework in which medicine is practised in the UK, including: the organisation, management and regulation of healthcare provision; the structures, functions and priorities of the NHS; and the roles of, and relationships between, the agencies and services involved in protecting and promoting individual and population health.	1-3	3
23D	Promote, monitor and maintain health and safety in the clinical setting, understanding how errors can happen in practice, applying the principles of quality assurance, clinical governance and risk management to medical practice, and understanding responsibilities within the current systems for raising concerns about safety and	3-5	5

	quality.		
Tomorrow's doctors 2009	Knowledge and understanding, skills and other attributes TD2009 Outcomes 3 - The doctor as a professional At the end of the programme students should:	Occurs in Year:	Assessed at graduate level by completion of Year:
23E	Understand and have experience of the principles and methods of improvement, including audit, adverse incident reporting and quality improvement, and how to use the results of audit to improve practice.	1,3,5	5
23F	Respond constructively to the outcomes of appraisals, performance reviews and assessments.	1-5	monitored throughout the programme
23G	Demonstrate awareness of the role of doctors as managers, including seeking ways to continually improve the use and prioritisation of resources.	1,3	3
23H	Understand the importance of, and the need to keep to, measures to prevent the spread of infection, and apply the principles of infection prevention and control.	1-2	monitored throughout the programme
23 I	Recognise own personal health needs, consult and follow the advice of a suitably qualified professional, and protect patients from any risk posed by own health.	1-5	monitored throughout the programme
23J	Recognise the duty to take action if a colleague's health, performance or conduct is putting patients at risk.	1-5	5
Appendix 1 procedures			
Diagnostic procedures			
1	Measuring body temperature	2	2
2	Measuring pulse rate and blood pressure	2	2
3	Transcutaneous monitoring of oxygen saturation	2	2
4	Venepuncture	3	3

5	Managing blood samples correctly	2	3
6	Taking blood cultures	5	5
7	Measuring blood glucose	2	2
8	Performing and interpreting a 12-lead Electrocardiograph (ECG)	3	3
9	Managing an Electrocardiograph (ECG) monitor	5	5
10	Basic respiratory function tests	2	2
11	Urinalysis using Multistix	2-3	3
12	Advising patient on how to collect a mid-stream urine specimen	3	3
13	Taking nose, throat and skin swabs	3	3
14	Nutritional assessment	3	3
15	Pregnancy testing	4	4
Therapeutic procedures			
16	Administering oxygen	3-4	4
17	Establishing peripheral intravenous access and setting up an infusion; use of infusion devices	3-5	5
18	Making up drugs for parenteral administration	5	5
19	Dosage and administration of insulin and use of sliding scales	5	5
20	Subcutaneous and intramuscular injections	3	3
21	Blood transfusion	5	5
22	Male and female urinary catheterisation	3	3
23	Instructing patients in the use of devices for inhaled medication	2	2
24	Use of local anaesthetics	2,5	5
25	Skin suturing	5	5

26	Wound care and basic wound dressing	5	5
27	Correct techniques for 'Moving and handling', including patients	3	3
	General aspects of practical procedures		
28	Giving information about the procedure, obtaining and recording consent, and ensuring appropriate aftercare	1 - 5	1 - 5
29	Hand washing (including surgical 'scrubbing up')	1 - 5	1 - 5
30	Use of personal protective equipment (gloves, gowns, masks and so on) in relation to procedures	1 - 5	1 - 5
31	Infection control in relation to procedures	1 - 5	1 - 5
32	Safe disposal of clinical waste, needles and other 'sharps'	1 - 5	1 - 5

Students on the MChB programme at Keele University will achieve the graduate level learning outcomes through a range of learning, teaching and assessment opportunities.

Learning outcomes	
↓	↑
<p>Learning & Teaching Processes (to allow students to achieve intended learning outcomes)</p>	<p>Assessment of intended learning outcomes is by theme. The percentage of each assessment allotted to each theme is informed by the amount of learning time allocated to each theme.</p>
<p>Learning outcomes will be achieved through a blend of:</p> <ul style="list-style-type: none"> Problem-based learning Laboratory sessions (e.g., anatomy, biochemistry, histopathology, microbiology, pharmacology, physiology, clinical skills, information technology) Communication skills sessions Experiential learning on clinical placements and other environments Student-Selected Components (SSCs) Clinical Reasoning and problem solving components 'Question time sessions' / lectures / seminars Tutorials Distributed learning Private Study – directed and self-directed 	<p style="text-align: center;">→</p> <p>Phase 1 (Year 1): Assessment of academic content: Knowledge-based assessments Skills-based assessments Student-Selected Component: Essay style written assignment</p> <p>Assessment of professional competence: Attitude-based assessments: Learning Portfolio and appraisal meeting</p>
	<p>Phase 2 (Years 2- 3) Assessment of academic content: Knowledge-based assessments Skills-based assessments Student-Selected Components: Essay style written assignments; Formal written reports; Scientific meeting style presentations.</p> <p>Assessment of professional competence: Attitude-based assessments: Learning Portfolio, including the Clinical Log Book and appraisal meeting (Year 3 only)</p>
	<p>Phase 3 (Year 4) Assessment of academic content: Written reports; essay style written assignments Student-Selected Components: Essay style written assignments Competency-based assessments</p> <p>Assessment of professional competence: Attitude-based assessments: Learning Portfolio, including the Clinical Log Book and appraisal meeting</p>

		<p>Phase 4 (Year 5)</p> <p>Assessment of academic content: Competency-based assessments</p> <p>Assessment of professional competence: Attitude-based assessments: Learning Portfolio, including the Clinical Log Book and appraisal meeting</p>
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How the Programme is taught

Learning medicine relies on methods that are clinically realistic. This programme achieves this by offering students many and various learning styles and opportunities: PBL, lectures, practicals, experiential learning.

Assessment is constructed both to facilitate learning (formative) and to allow summative judgements about knowledge, understanding and skill development. Teaching, learning and assessment are inter-related throughout.

Our programme is designed to assist undergraduates to achieve the requirements of the course and to maximise their career progression and leadership potential through opportunities to study a range of complementary subjects drawn from the University, including the humanities. We aim to make learning enjoyable through small class sizes, small group learning, early clinical experience and supporting individual students to develop into highly competent and self-aware professionals.

1. The curriculum has four phases jointly delivered at the University and in primary and secondary care settings.
 - I. **Challenges to health-** Comprehensive overview year (Year 1) of all aspects of medicine with early clinical exposure, with emphasis on normal structure and function
 - II. **Integrated Clinical Pathology:** A second run through several aspects of medicine with emphasis on abnormal structure and function. (Year 2 & 3) Year 3 is mainly hospital based.
 - III. **Advanced Clinical Experience** - Immersion in hospital based clinical practices rotating through key general specialties.(Year 4)
 - IV. **Preparation for Professional Practice-** Student assistantships to prepare for practice. Intended Learning Outcomes pitched at readiness for Foundation Year (FY1) training. (Year 5)

Educational strategies

The programme is based on a 'hybrid' approach that uses many methods.

Key Features:

- Vertical themes in each Year
- Problem Based Learning (PBL) is used in Years 1-2
- Cased Based Learning (CBL) is used in Year 3
- Case Illustrated Learning (CIL) is used in Year 4
- Up to 20 scheduled contact hours per week

- Up to 20 hours directed study per week
- Approximately 20% of the programme will be in community settings throughout the course
- Maximum of 5-6 lectures each week
- Each week in Year 1-2 ends with an 'integrating' event, 'Wrap up', for the week e.g., debate, panel presentation, clinical case presentation, Clinico-Pathological Cases .
- Emphasis on practical sessions
- Clinical/communication/information skills learning starts early in Year 1

Location

- Years 1 - 3: predominantly Keele campus and North Staffordshire health economy clinical settings
- Years 4 & 5: Allocations to dispersed bases in North Staffordshire (50-60%) Shropshire & Mid-Wales (30-40%); and Mid/south Staffordshire (10-15%)
- Year 5: Community placement in rural community nodes.

Teaching Staff

All members of the faculty have the capability and continued commitment to be effective teachers. They have knowledge of: the discipline; an understanding of pedagogy; methods of measuring student performance consistent with the learning objectives; and readiness to be subjected to internal and external evaluations.

The academic staff have: the required academic qualification for the discipline(s) they teach; expertise in one or more subdivisions or specialties within those disciplines; appropriate research and scholarship capabilities .They contribute to the advancement of knowledge and to the intellectual growth of their students through the scholarly activity of research and continuing education. Persons appointed to the faculty demonstrate achievement within their disciplines commensurate with their faculty rank.

Keele Medical School has a 2:1 ratio between medical and non-medical academic staff as well as the ratio of 2:5 between full-time and part-time staff.

The Structure of the Programme

Integrated curricular themes (present in all phases)	Phase	Philosophy	Year and units	
Scientific Basis of Medicine Clinical, Communication, and Information management skill Individual, Community, and Population Health Quality and Efficiency in healthcare	1	An overview year of all aspects of medicine with early clinical exposure. Emphasis on normal structure and function ‘supported’ PBL groups Ratio 90% non clinical:10% clinical	Phase 1: Year 1: Level 1: Challenges to health Credit value: 120 credits	
			Unit 1	Emergencies
			Unit 2	Infection & immunity
			Unit 3	Cancer
			Unit 4	Ageing
			Unit 5	Lifestyle
			Unit 6	Complex family
			SSC	Student-Selected Component

Integrated curricular themes (present in all phases)	Phase	Philosophy	Years and units	
Scientific Basis of Medicine Clinical, Communication, and Information management skill Individual, Community, and Population Health Quality and Efficiency in healthcare	2 ^a	A second cycle through several aspects of medicine. Emphasis on abnormal structure and function PBL groups and weekly cases Ratio 80% non clinical:20% clinical Appropriately qualified graduates who enter at this phase carry 120 credits in respect of phase 1. Entry route not available from 2013	Phase 2: Year 2 Level 2: Integrated Clinical pathology 1 Credit values: 120 credits per year	
			Unit 1	Inputs and Outputs
			Unit 2	Movement
			Unit 3	Life Support and Defence
			Unit 4	Sensation
			SSC	Student-Selected Component
Optional Intercolated Bachelors Degree after Year 2* (see below)				

Integrated curricular themes (present in all phases)	Phase	Philosophy	Year and units	
<p>Scientific Basis of Medicine</p> <p>Clinical, Communication, and Information management skill</p> <p>Individual, Community, and Population Health</p> <p>Quality and Efficiency in healthcare</p>	2 ^b	<p>A second cycle through several aspects of medicine.</p> <p>Emphasis on abnormal structure and function</p> <p>Clinical-Case Based Learning (CBL) groups and weekly cases in clinical rotation blocks</p> <p>Non clinical = 1 day a week Keele Spine , 1.5 days non clinical learning opportunities provided on clinical site</p> <p>Ratio 50% non clinical:50% clinical</p>	<p>Phase 2 Year 3; Level 3</p> <p>Integrated Clinical pathology 2</p> <p>Credit values: 120 credits per year.</p>	
			Unit 1	Surgical patient
			Unit 2	Medical patient 1
			Unit 3	Young patient
			Unit 4	Elderly patient
			Unit 5	Medical patient 2
			Unit 6	Mental Health
			SSC	Student-Selected Component
Optional Intercalated Masters Degree * (see below)				

Integrated curricular themes (present in all phases)	Phase	Philosophy	Year and units	
<p>Scientific Basis of Medicine</p> <p>Clinical, Communication, and Information management skill</p> <p>Individual, Community, and Population Health</p> <p>Quality and Efficiency in healthcare</p>	3	<p>Mainly hospital-based</p> <p>Small group clinical learning</p> <p>Readiness for workplace Year 5 model</p> <p>Ratio 20% non clinical:80% clinical</p>	<p>Phase 3 : Year 4: Level 3: Advanced Clinical Experience</p> <p>Credit value: 120 credits.</p>	
			Unit 1	Surgery
			Unit 2	Child Health / Mental Health
			Unit 3	Women's Health
			Unit 4	Integrated Medical Practice 1
			Unit 5	Integrated Medical Practice 2
			SSC	Student-Selected Component
Optional Intercalated Masters Degree * (see below)				

Integrated curricular themes (present in all phases)	Phase	Philosophy	Year and units	
<p style="text-align: center;">Scientific Basis of Medicine</p> <p style="text-align: center;">Clinical, Communication, and Information management skill</p> <p style="text-align: center;">Individual, Community, and Population Health</p> <p style="text-align: center;">Quality and Efficiency in healthcare</p>	4	<p>Workplace-immersed FY1 preparation</p> <p>Focus on application of knowledge & to refine skills</p> <p>Ratio 10% non clinical: 90% clinical</p> <p>Intended learning outcome by the end of Year 5 - Prepared for Professional Practice</p>	Phase 4 : Year 5: Level 3: Preparation for Professional Practice	
			Unit 1	GP assistantship 15 weeks
			Unit 2	Acute and Critical Care (emergency medicine, Intensive care unit & anaesthesia) 5 weeks
			Unit 3	Medicine student assistantship 5 weeks
			Unit 4	Surgical student assistantship 5 weeks
			Unit 5	Distant elective/corrective 8 weeks
			2 weeks shadowing -Preparation for Professional Practice	

Intercalated degrees

Undergraduates may suspend their medical degree for a period of 12 months to undertake either a BSc degree, normally after Year 2 or Year 4 or a Masters degree after Year 4

To undertake such an intercalated degree, students must be given permission by the School of Medicine as well as being offered a place on their chosen course. The former will be decided by an intercalation panel and will be based on the student's academic record and on their motivation for completing the intercalated degree. The presence of a resit examination on the student's academic record will not necessarily prevent them being granted permission to intercalate and decisions will be made on a case-by-case basis, following the interview process. We anticipate that preliminary notification of the permission to intercalate will be sent out mid-end February. Students who are given permission to intercalate will have passed all their assessments by the time they commence their intercalated degree. Final permission to intercalate will be given after the results of the relevant examinations are known.

<http://www.keele.ac.uk/health/schoolofmedicine/undergraduatemedicalcourse/courseinformation/intercalateddegrees/>

Student-Selected Components

In addition to the core modular content, there is the opportunity to consolidate that information and gain non-core experience and knowledge in Student-Selected Components (SSCs) in Years 1, 2, 3 and 4 and the Year 5 elective.

The SSC programme has a defined progression:

Year 1: Literature review

Year 2: Engagement with local community

Year 3: Career path exploration: in the humanities, research or clinical areas.

Year 4: Career exploration in clinical areas

Assessment

Aims:

The School of Medicine has a comprehensive assessment programme that:

- a. Assists students to achieve the learning outcomes of the medical programme;
- b. Facilitates the development in students of the learning skills necessary to maintain currency in later professional practice;
- c. Provides evidence of the extent to which students have achieved the learning outcomes of the course;
- d. Employs assessment methodologies that reflect current, evidence-based, best practice.

Principles:

1. The assessment policy is an open document that is available to all students and staff;
2. Assessment is matched to the curriculum in both content and process and therefore assesses knowledge, skills and professionalism in an integrated manner across themes and Years, guided by the learning outcomes of the programme
3. The entire assessment programme is designed to provide feedback to students on their learning progress (formative assessment) and approximately 25% of assessment is intended primarily for decision-making (summative assessment);
4. Satisfactory participation (defined below) in formative assessment, although not a specified level of achievement, is a pre-requisite for eligibility to sit the summative assessment node at the end of each year;
5. All assessment items are quality assured through appropriate development and analysis processes;
6. All assessment (both content and method) is approved prior to implementation by the relevant school governance structures; and
7. Students experience all modes of assessment formatively before they are used summatively.

Formative assessment

The role of formative assessment is to guide further development through the provision of comprehensive feedback to students on their learning progress.

Principles

- Formative assessment forms the majority of the total assessment load within the medical programme;
- A wide range of assessment methods and formats are employed, including all of those used in summative assessment, matched to learning outcomes and processes;
- A proportion of formative assessment items are sampled for inclusion in summative assessments;

- Where possible feedback is automated through model answers and student-led discussions through the Keele Learning Environment (KLE);
- The student workload of all formative assessment activities should add on average 1 hour per week;
- Students are offered comprehensive feedback on their performance in all major assessments;
- Students must maintain a learning portfolio record of formative assessments for regular personal reflection and discussion with tutors; and
- Participation in formative assessment is one way students can demonstrate satisfactory participation in learning

Assessment approaches

Formative assessment is provided during each Year in five ways:

1. Opportunities for entirely formative In-Year assessments are provided during all Years to ensure that students can be familiar with assessment formats used in summative assessment.
2. In Year 1 & 2 regular Blackboard tests that include 10-15 questions per Unit, including True/False (T/F), Multiple Choice Questions (MCQ) and Extended Matching Questions (EMQ) formats. These are computer-marked and aim to provide feedback on incorrect answers. This is designed to provide feedback on subject content coverage including strengths and weaknesses across themes.
3. In Years 3-5 a variety of formats and methods, as appropriate to the topic or subject, are available.
4. Throughout the course mandatory submission of reports of professional/clinical behaviour. During each Year reports are required from a defined range of student contacts (e.g. self, peers, tutors, clinicians, patients, administrative and technical staff) who can comment on aspects of the students' performance.
5. In Years 3-5 there are compulsory formative work-place based assessments to support students' learning and acquisition of skills.

Assessment methods

The medical school has a range of assessment modes appropriate to assess each of the ILOs, categorized across three domains; **Doctor as Professional, Doctor as Practitioner, Doctor as Scholar and Scientist**

In every Year all domains will be summatively assessed using appropriate assessment methods.

Doctor as Professional	Doctor as Practitioner		Doctor as Scholar and Scientist
	Information Management Skills	Clinical & Practical Skills	
Learning portfolio MSF (multi source feedback) Reflective summaries Appraisal End of firm reports	Written communication skills	Practical assessments of skills	Knowledge assessment

The modes of assessment include:

In-Year written work

Written work/assignments test the quality and application of the subject knowledge. In addition they allow students to demonstrate their ability in communicating effectively for a range of audiences and purposes.

Written information management skills assessments.

Students are required to demonstrate competence in a range of skills in defined conditions e.g. publication based paper, data interpretation paper, critical appraisal paper

Written knowledge examination.

Knowledge is examined in a range of formats that test students' knowledge and their ability to apply this knowledge to professional practice. Examinations may consist of multiple choice questions, extended multiple choice question and key feature problems.

Reflective assignments.

Reflective assignments enable students to develop the skills of reflective learning and practice; these are fundamental skills used by the medical profession as part of their continuing professional development.

Practical examinations. These examinations enable students to demonstrate a safe and effective application of practical clinical and laboratory skills.

Employability skills

In addition to the formative and summatively assessed specific learning outcomes of the MBChB, the students will be expected to achieve competence in the employability skills listed below.

The School of Medicine, Keele University: Graduating Excellent Clinicians

The Keele University MBChB course has been developed by a team of experienced medical educators, clinicians and biomedical, behavioural and social scientists. In 2011 the GMC accredited the course, adding Keele to the list of bodies that may award a Primary Medical Qualification. The curriculum's design is underpinned by modern, evidence-based educational theory and is specifically intended to produce doctors who achieve the outcomes specified by the General Medical Council's document *Tomorrow's Doctors* and become excellent clinicians. *Tomorrow's Doctors* specifies the learning outcomes that every medical graduate should achieve, and divides them into three categories, for each of which Keele medical students will have the opportunity to develop the distinctive attributes shown below as well as all of the outcomes defined by the GMC

1. The doctor as scholar and scientist. Keele graduates will have the opportunity to develop:

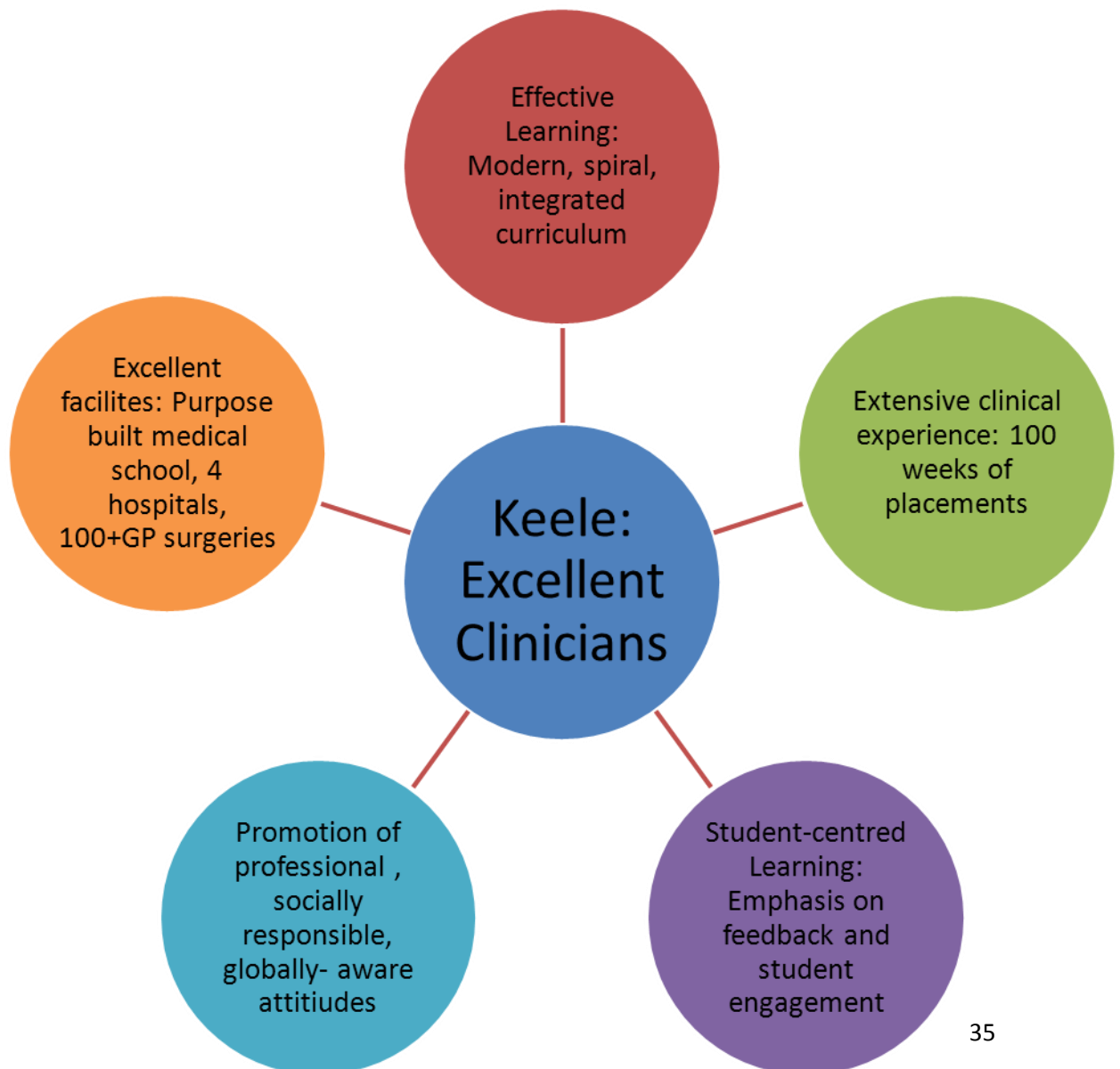
1. The knowledge, skills, self-confidence and self-awareness actively to pursue your future goals (Keele Graduate Attribute [KGA] 7)
2. An appreciation of the development and value of your chosen subjects of study, awareness of their contexts, the links between them, and awareness of the provisional and dynamic nature of knowledge (KGA 2)
3. Information literacy: the ability to locate, evaluate and synthesise large amounts of frequently conflicting information, ideas and data (KGA 3)

2. The doctor as a practitioner. Keele graduates will have the opportunity to develop:

1. The ability to communicate clearly and effectively in written and verbal forms for different purposes and to a variety of audiences (KGA 6).
2. An open and questioning approach to ideas, demonstrating curiosity, independence of thought and the ability to appreciate a range of perspectives on the natural and social worlds (KGA 1)
3. The ability creatively to solve problems using a range of different approaches and techniques, and to determine which techniques are appropriate for the issue at hand (KGA 4)

3. The doctor as a professional. Keele graduates will have the opportunity to develop:

1. The flexibility to thrive in rapidly changing and uncertain external environments and to update skills and knowledge as circumstances require (KGA 10)
2. A professional and reflective approach, including qualities of leadership, responsibility, personal integrity, empathy, care and respect for others, accountability and self-regulation (KGA 9)
3. An appreciation of the social, environmental and global implications of your studies and other activities, including recognition of any ethical implications (KGA5)
4. The ability and motivation to participate responsibly and collaboratively as an active citizen in the communities in which you live and work (KGA 8)



Transfer routes / exit points

The end award is MBCChB (Honours), however, the following Intermediate awards may be available at appropriate exit points: Certificate of Higher Education in Applied Medical Sciences; Diploma of Higher Education in Applied Medical Sciences; and BSc Honours Degree in Applied Medical Sciences. These intermediate awards imply no eligibility for professional recognition or registration, or fitness to practise.

Intercalated degrees

See page 30 for details or consult our website:

<http://www.keele.ac.uk/health/schoolofmedicine/undergraduatemedicalcourse/courseinformation/intercalateddegrees/>

The admission requirements for the MBCChB programme

Specific entrance requirements

Academic requirements:

(Accurate February 2012.)

Please check website for current entry requirements:

www.keele.ac.uk/health/schoolofmedicine

AS/A Levels (and Equivalents) and GCSEs

Three A Level subjects plus a fourth AS level are required. Of these, chemistry or biology is essential at A Level, plus a second subject from chemistry, biology, physics and mathematics, plus one further rigorous academic subject if only 2 sciences are offered. If chemistry is not taken at A Level, it must be achieved at AS Level. Grade requirements at A/AS Level, and lists of acceptable A Level subjects, are published on the School of Medicine web pages.

The Welsh Baccalaureate is accepted in combination with at least two science A Levels plus a third AS Level. Biology and chemistry requirements are the same as for students taking three A Levels. Equivalent subject and grade requirements for Scottish Highers/Advanced Highers, Irish Leaving Certificate and International Baccalaureate are published on the School of Medicine web pages.

GCSEs in mathematics, English language and any science not achieved at a minimum of AS level grade B must be passed at GCSE. GCSE grade requirements are published on the School of Medicine web pages. All UK students must have undertaken key stage 4 study of science as defined within the National Curriculum for England, Wales and Northern Ireland, i.e. science plus additional science or three separate sciences (chemistry, physics and biology). Level 2 qualifications other than GCSEs may be accepted at the discretion of the Admissions Committee.

Conditions affecting students taking more than two years to complete their A Levels (or equivalent qualifications) or presenting extenuating circumstances for grades below the published requirements are published on the School of Medicine web pages.

English Language: Acceptable Qualifications

Students from the European Union and from overseas, not offering GCSE English language are required to complete a recognised international English language qualification. Details of the accepted tests and required grades are published on the School of Medicine web pages.

International qualifications

Students with qualifications from other countries are assessed on the basis of equivalences published by the National Academic Recognition Information Centre (NARIC). Where direct equivalence cannot be determined, overseas qualifications may be accepted at the discretion of the Admissions Committee.

Graduate Applicants

Applications from students holding degrees at a minimum of upper second-class honours (or equivalent) are assessed on the basis of degree performance where the first degree is in a discipline with a significant chemistry or molecular bioscience content. Graduates with degrees in other disciplines may be considered on the basis of a combination of their degree and their school qualifications. Graduates must fulfil the same English language and mathematics requirements as other applicants.

Health Foundation Year Students

The progression from Keele's Health Foundation Year (HFY) to year 1 of the MBChB programme is automatic but dependent on students gaining 70% in all HFY modules and satisfying all health & conduct/fitness to practise requirements. If a student repeats the HFY for Medicine they are required to achieve 75% in all modules.

Transfers from Partner Medical Schools

We will consider applications for entry to the course at year 3 from students who have successfully completed the 5-semester pre-clinical course at the International Medical University, Malaysia, subject to satisfaction of the English language requirements detailed above. Students who are accepted will study years 3, 4 and 5 at Keele University and its affiliated hospitals/general practices, and will be eligible for the award of the MBChB degree of Keele University.

Transfers from Other Medical Degree Courses

Transfers from other medical schools into later years of the course will not usually be considered. In exceptional circumstances, students who have commenced a medical degree course at another institution may apply for entry to year 1 of the Keele MBChB programme. Such applications are permitted at the discretion of the

Admissions Committee and are subject to demonstration of academic achievement at a level considered equivalent to the normal entry requirements.

Non-Traditional Applicants

Students with non-traditional academic backgrounds may enter through two different routes. Students with a strong academic record but without the science qualifications required for entry to the five-year MBChB programme may apply for the Health Foundation Year for Medicine subject to the entry requirement published for the HFY. Students who do not have academic qualifications beyond level 2 (GCSE or equivalent), or who are making a career change several years after completing full-time education, may undertake an Access to Medicine diploma course to provide evidence of the required academic aptitude. A list of Access to Medicine diplomas that are recognised by Keele University is published on the School of Medicine web pages.

UKCAT

United Kingdom Clinical Aptitude Test (UKCAT)

All applicants for entry to year 1 or to the HFY must undertake the United Kingdom Clinical Aptitude Test in the year of application. The results from this will contribute to our decision-making process. Details of how UKCAT results are used are published on the School of Medicine web pages.

Health Requirements

All applicants who are made an offer of a place must satisfy occupational health requirements, including confirmation of immunity/vaccination status against a list of infectious diseases.

Students with Disabilities

Applicants are advised to declare any special needs on the UCAS application form. Applications will then be considered in the usual way. Potential applicants are advised to contact the Admissions Manager for further advice prior to submitting a UCAS application, so that individual circumstances may be considered.

Keele University welcomes applications from disabled students and strives to provide an appropriate level of support to meet known individual needs. The University is committed to comply with the 2010 Equality Act and any guidance issued by the Council of Heads of Medical Schools (Guiding Principles for the Admission of Medical Students 1999) and General Medical Council. We consider applications against the usual academic criteria. However we also take into account any limitations in accordance with the General Medical Council Fitness to Practise requirement that students must meet the standards of competence, care and conduct as laid out in the GMC Good Medical Practice guide (2009). Anyone with a disability wishing to enter medical school is advised to read and reflect on this document.

All applicants holding an offer to study medicine must satisfactorily complete a health questionnaire as part of the condition of their offer to study medicine at Keele University. Applicants must declare any history of mental ill health, but this will not jeopardise a career in medicine unless the condition impinges on professional fitness to practise and is ongoing or likely to recur.

Applicants indicating Dyslexia on their UCAS form should note that they will be expected to supply the University with a copy of their assessment by an Educational Psychologist.

If an application is of a sufficiently good standard, applicants will be invited to attend for interview. No candidate will be offered a place without interview. Following this all successful applicants are sent a health questionnaire and the Occupational Health Unit may invite them to discuss how they manage their disability or condition and what coping strategies they have developed, so that a judgement can be reached regarding their fitness to practise.

Applicants should be aware that whilst appropriate measures can be taken to accommodate particular needs to enable them to study effectively in the theoretical and classroom components of the course, clinical practice placements may require alternative arrangements.

Under the direction of the Director of Professional Development and Welfare, the School of Medicine reviews all students' general progress regularly and will discuss with them any support issues related to their disability or condition. We operate a Health and Conduct Committee as well as a Progress Committee.

If it appears that their condition compromises safety in a clinical setting or that it is unlikely that they will be able to meet the fitness to practise requirements for registration with the General Medical Council, then this will be discussed with students as soon as possible and appropriate guidance and support will be offered. This may result in a referral to the University's Fitness to Practise Committee, and possibly to them being unable to remain on their current programme.

Keele University provides Student Support and Development Services (SDSS) which can provide advice and support to disabled students.

For further information see:

www.keele.ac.uk/depts/aa/disabilityservices

Further information can be found at:

Council of Heads of Medical Schools - www.chms.ac.uk/fastuds.html

General Medical Council - www.gmc-uk.org

Student support on the MBChB

Pastoral support

Pastoral support will be organised and managed by the Director of Professional Development and Welfare for the School of Medicine. A team of pastoral tutors are available to see all students about any problems on a confidential basis. The students are also encouraged to use University and external sources of support. Particular support is arranged for disabled students and those who are called to Progress and/or Health and Conduct committees. The tutors are particularly able to advise and counsel students about the professional demands of a career in medicine.

Academic and pastoral support is normally provided by:

- PBL tutors: who act as personal tutors for their current group(s)
- Appraisers: who oversee students through the course of the programme and are responsible for appraisal of their professional development
- Academic advisors are allocated to students in Year 1 to provide support as required and will usually follow students through to at least Year 4.
- Peer mentors: students in later years will have mentoring roles for students in earlier years
- Year leaders: will provide support for academic issues related to their Year
- Firm tutors: will support students in clinical practice

Additional support is available from:

- Pastoral tutors: who provide additional support at the University campus when necessary
- Year Leaders: who provide additional support at the Hospital campus when necessary
- Senior Tutors: to whom students may be referred by other tutors; students may refer themselves.
- Directors of Undergraduate Studies: who also have disciplinary responsibility.
- Keele University provides support, guidance and advice for all its students available through Student Support and Development Services

Learning Resources

The programme has a mixture of academic and clinical experiences and thus a wide range of learning resources support the programme.

The main teaching hospital in Staffordshire is the University Hospital of North Staffordshire that is on the same site as the North Staffordshire Combined Healthcare NHS Trust which also offers clinical placements. In addition, the Shrewsbury & Telford Hospitals NHS Trust is an Associate Teaching Hospital, providing teaching hospital facilities in Shropshire. In Years four and five approximately 100 students in total will undertake clinical experience at the Shropshire Campus of the School of Medicine on a rotational basis. Approximately 40 students will undertake clinical placements at the Mid-Staffordshire NHS Foundation Trust. Additionally, students will have placements in a range of community and District General Hospital or Specialist Hospital settings (please see below for further details).

The non-clinical components are based in the School of Medicine building on Keele campus. This is a very spacious, light and airy building, opened in September 2003, and includes a large lecture theatre, seminar rooms, IT laboratory (60 PCs), student common room and social gathering and refreshment areas. Additionally, there is an anatomy suite comprising a large dissecting room and a resource room where exhibits are displayed to facilitate study. Although most of the material is anatomical, other disciplines such as pathology are included. There are dissected specimens (prosections), models, bones, microscopes with histology slides, pathology pots, posters and CAL (computer aided learning) material. There are three Multi User Laboratories with equipment and resources that are mainly for the study of human physiology, pharmacology and histopathology and related biosciences. The resources range from microscopes for histology work, to biochemical equipment and facilities for biological investigations to computerised spirometry and ECG recording. Groups of networked PCs are available throughout the University, however the largest groups of open-access PCs (over 200 in total) are available in the Library Building. Most of these will be found in the in the IT Suite on the first floor. The computing facilities comprise a laboratory containing 63 PCs with monochrome printers and scanners. Colour printing may be directed to the library building machines and collected from there. The PCs run Microsoft Windows 7, providing access to the standard word processing, spreadsheet and database software. Additional software includes many CAL packages. The suite is networked and has full access to the Internet. In addition, there is a computer in each of the 12 seminar rooms in the building, and computers in the Anatomy Suite Resource room and the Multi-user lab. All students have individual e-mail accounts and a small amount of private file space on the University fileserver.

At the University Hospital of North Staffordshire the School of Medicine building, which opened in January 2003, contains a lecture theatre, seminar rooms and a student resource room. In addition, there are a range of seminar/meeting rooms strategically placed around the hospital adjacent to wards and other clinical areas to assist in teaching close to or in contact with patients and other professional

colleagues.

Additionally, the programme is also delivered in the Clinical Education Centre, within the University Hospital of North Staffordshire, which opened in September 2004. This houses not only facilities for student doctors, but also incorporates the School of Nursing & Midwifery, and Postgraduate Medical and Dental Education (i.e. the NHS Foundation School and specialist training). The seminar rooms, extensive clinical skills laboratories, interprofessional Health Library and IT laboratories, not only provide state of the art teaching facilities, but also allow and encourage multi disciplinary learning and team working. This multi professional approach is seen as key to developing the workforce of the NHS. At the Clinical Education Centre, the clinical skills laboratories have recently been upgraded and extended to provide superb facilities including resuscitation and paediatric areas, intermediate and advanced skills laboratories, and allow the use of Sim Man training. In the IT Suite on the ground floor, adjacent to the Health Library, there are 75 computers for student use, together with scanners and printers. The Library itself has photocopying facilities and 5 computers in a central area.

University Hospital of North Staffordshire NHS Trust

The Trust is one of the largest and busiest acute hospitals in the country, with an annual budget exceeding £290 million. The Trust serves almost 500,000 people in North Staffordshire and provides a range of speciality services for more than 3,000,000. It employs over 7,400 staff and has over 12500 beds. The Trust met all of its targets this year. During the year we saw over 116,000 outpatients for the first time and more than 289,000 for follow up appointments. We treated over 17,000 planned inpatients and 42,000 day cases. More than 58,500 emergency inpatients were admitted and 121,489 attended our A & E, Medical and Surgical Assessment Units.

The Trust is based at Hartshill in the City of Stoke-on-Trent. Its two main hospital sites, the City General and the Royal Infirmary, are less than a mile apart. Between these two hospitals, a third site accommodates the Central Outpatients Department, the Central Pathology Laboratory and some smaller Departments.

Nearly all of the acute medical and surgical specialities are on the City General Hospital site, along with the Maternity Hospital and a new Orthopaedic Unit. Some specialities such as Radiotherapy, Cardiothoracic Surgery, Ophthalmology, Accident & Emergency, Renal Medicine, and Neurosciences remain at the Royal Infirmary. Major building redevelopment schemes have now been completed at the Royal Infirmary to expand the facilities and services provided by Radiotherapy, Cardiac Surgery, and Renal Medicine. The Trust is also a designated Cancer Centre working in partnership with a network of West Midlands Cancer Units. Our major PFI project Fit for the Future will bring all of these services onto a single site.

TRUST MANAGEMENT ARRANGEMENTS

Incrementally, the University Hospital of North Staffordshire NHS Trust has streamlined its management arrangements based on the devolution of authority to

Clinical Divisions and Directorates which have their own managerial support and budgetary responsibility. The philosophy has been to ensure clinicians are at the heart of the management process.

The Trust is in the process of implementing a revised Divisional and Management structure. The three new Divisions are:

- Surgical Division
- Support Services Division
- Medical Division

These Divisions are led by a management team comprising Associate Director, Clinical Director, Directorate Managers, Operational Services Managers, Financial Management, Human Resources Managers.

Corporate support is provided by the following central functions: a Department of Nursing and Operations; Directorates of Finance, Human Resources, Information Management & Technology and Service Modernisation.

The Hospital's business is run by two Boards. The Trust Board determines the strategic direction of the Trust and fulfils statutory responsibilities. The Executive Board has responsibilities to translate strategy into policy and action. The Trust Board comprises Executive Directors and Heads of Division, or a nominated deputy.

North Staffordshire Combined Healthcare NHS Trust. (Harplands Hospital and Community Mental Healthcare services)

The North Staffordshire Combined Healthcare Trust provides secondary care mental health services to the population of North Staffordshire.

The Harplands Hospital complex, opened in 2001, is the central facility within the network of psychiatric services in North Staffordshire. The main building houses 120 beds for General Adult and Old Age Psychiatry. The site also accommodates an assessment unit for people with learning disabilities who are also mentally ill, a specialised unit for the treatment and rehabilitation of people with addictions, and a number of other sub-specialty services. In the surrounding district are to be found six centres housing teams of mental health professionals. These teams provide the full range of psychiatric treatments to patients in the community. Designed with strong input from users, they are intended to be easily accessible to people living in local communities. They are each equipped with eight beds, intended to provide continuing care in a less institutional setting for mentally ill people who were initially treated at the Harplands Hospital, as well as respite care and support at times of crisis.

Haywood Hospital (Stoke-on-Trent PCT)

Rheumatology and specialist rehabilitation are provided at the Haywood Hospital in Burslem. The hospital has recently been re-built, as part of the Fit for the Future project, with state of the art facilities. It is managed by Stoke on Trent Primary Care

Trust and includes in-patient and out-patient facilities, including consultation suites, physiotherapy, hydrotherapy and occupational therapy services. There are in-patient wards for Rheumatology and Rehabilitation, including stroke rehabilitation. On-site diagnostic facilities include plain radiography, ultra sound and bone density (Dexa) scanning.

The Shrewsbury and Telford Hospital NHS Trust

The Royal Shrewsbury Hospital (RSH) has a catchment population of 500,000 centred upon the county town of Shrewsbury and supplies services to a large rural population in West Shropshire and neighbouring Powys. RSH currently provides all the acute medical and surgical admissions for this area and provides a comprehensive diagnostic and therapeutic service. It has approximately 507 beds. The Princess Royal Hospital at Telford, opened in 1989, primarily served the population of east Shropshire, while the Royal Shrewsbury Hospital served the western half of the county into mid-Wales. Telford has 360 beds and is situated in over 50 acres of parkland. Following the managerial merger of the two hospitals in October 2003, there has been increased collaborative working with one surgical care directorate and a separate anaesthetic & critical care directorate for the combined trust.

Other NHS Trusts in the county of Shropshire include the Shrewsbury facilities of the South Staffordshire and Shropshire Healthcare NHS Foundation Trust, which is a mental health trust, (see below), and The Robert Jones and Agnes Hunt Orthopaedic and District Hospital NHS Trust at Oswestry (on the Welsh border,) containing a spinal injuries and a children's orthopaedic unit. These 2 hospitals are independent from the Shrewsbury and Telford merger.

Mid-Staffordshire NHS Foundation Trust

Mid Staffordshire NHS Foundation Trust operates and manages the two hospitals in Mid Staffordshire – Stafford Hospital and Cannock Chase Hospital. Foundation Trusts have more financial freedom to develop services best suited to local needs, along with greater involvement from patients and the public in deciding what they want from their local hospitals. The Trust provides a wide range of healthcare services – both medical and surgical – for the people of Stafford, Cannock, Rugeley and surrounding areas, with a catchment of over 300,000 people.

Stafford Hospital has an Accident and Emergency department, and provides all the acute medical and surgical admissions for the area with a comprehensive diagnostic and therapeutic service. It has 354 inpatient beds. Cannock Chase Hospital is home to the Trust's impressive elective orthopaedic unit opened in 2002, and is also the base for rheumatology, dermatology and elderly care services. It has a 24-hour nurse-led minor injury unit, an Outpatient Department, 115 inpatient beds and comprehensive rehabilitation facilities.

South Staffordshire and Shropshire Healthcare NHS Foundation Trust

South Staffordshire and Shropshire Healthcare NHS Foundation Trust facilities at Shrewsbury and at St. George's Hospital in Stafford provide mental health, learning disability and specialist children's services across South Staffordshire and mental health and learning disability services in Shropshire, Telford & Wrekin and Powys.

The Trust serves a population of 1.1 million, over an area of 2,200 square miles, with over 3,400 staff, and offers an extensive range of services including Children and Family services, Adult Mental Health, Specialist Services, Forensic Mental Health services and Developmental Neurosciences & Learning Disabilities.

Community Experience

One of the major changes to modern medical school curricula is the amount of teaching that now takes place in general practice and community settings. Medical students now must understand that patients receive most of their health care in or close to their own homes from their general practitioners and community services. As a result, relatively little healthcare is delivered in hospitals. This is reflected in students spending more time learning in general practices and with community services than in the past.

Throughout your time as a medical student at Keele you will be encouraged to think of community and social dimensions of illness and health. You will have placements with community services and general practices in Years 1 and 2 and over 20% of teaching in Years 3, 4 and 5 takes place in general practices. Examples of other community services we use are schools, chemists/pharmacies, the workplace, residential homes, gyms and drop-in centres to name but a few; all places which contribute to the health and care of people.

You will be learning in general practice and/or the community in each Year at Keele:

Year 1: 6 half days in general practices

Year 2: 24 hours working with community services. This is one of the Student Selected Components

Year 3: 4 weeks in a general practice

Year 4: 5 placements of 1 week in a general practice during the year

Year 5: 15 weeks in a general practice

Library Resources & Services

Keele's Library services, which operate from two sites, support student learning by providing:

- Copies of print textbooks and a growing collection of e-books
- Access to online journals and databases via the Library website
- Off-campus access to the majority of e-resources
- Inter-Library Loans services
- Training sessions/inductions
- Enquiries services
- Online and printed material, e.g. 'new starter' guide, floor plans

Keele University Library (Keele Campus) and the Health Library (Clinical Education, City General Hospital) both contain printed textbooks and journals. Access to key journal titles such as *BMJ*, *New England Journal of Medicine* and *The Lancet* is available.

- To search for books (includes e-books) and printed journals in Keele's Libraries use the Library Catalogue (covers both sites): <http://opac.keele.ac.uk/>
- To search for e-journals use the **Electronic journals** link on the Library Catalogue: <http://opac.keele.ac.uk/>
- To access relevant databases use the Library website (**Subject Resources**): www.keele.ac.uk/library

A third collection of printed material is at Shrewsbury Health Library, located in the Learning Centre, Royal Shrewsbury Hospital: view more details via the Library's website: <http://www.sath.nhs.uk/library/>

Keele University Library

Keele University Library accommodates Library and IT Services. It supports courses taught at the Keele Campus. The building overlooks Union Square - where the Students' Union is located. You will find copies of texts on your reading lists either online (as "e-books") or available for loan for two weeks or seven days; a limited number of copies of some core texts may also be found in the Short Loan collection on the Middle Floor (these are available for 24-hour loan). CDs and DVDs are also available to use/borrow in the Library. The building contains in the region of 460,000 volumes at the time of writing (February 2011).

Printed journals are kept on the Ground Floor; current issues of titles are displayed separately.

The Library also offers the following services:

- Website (via Library Services page)
- Printed and online guides
- Self-service points to issue and return books
- Group Study Rooms. You can book one to work in a group (via the Main Service Counter) – the rooms are on the Middle & Top Floors
- Enquiries service
- Self-service photocopiers
- Group study areas (Middle Floor) and Silent Study areas (Ground & Top Floors)
- Out-of-hours book return box
- Access to IT Suite & IT Labs
- Sale of stationery items (please note: USB sticks are purchased from IT Services)

Details of any extended opening openings are advertised on the Library website

Via the **Subject Resources** link on the Library website you will find links to some freely-available resources such as the Cochrane Library along with resources purchased to support your studies: health-related databases are also listed on these pages and include (at the time of writing):

MEDLINE and other core health databases (AMED, BNI, CINAHL, PsycINFO, SPORTDiscus), Web of Science and more. Access to an online learning package called Anatomy.TV is also available.

For more details, visit www.keele.ac.uk/library/

Health Library

The Library is located on the Ground Floor of the Clinical Education Centre, City General Hospital (University of North Staffordshire NHS Trust). It opened in 2004. It is used by staff and students of the School of Nursing & Midwifery and medical students based there during years 3-5. It is open to all members of Keele University and local NHS practitioners. It contains printed books and journals. Services include:

- Access to IT Suite
- Binding service
- Self-service photocopies (two use your Keele Card)
- Self-service points to issue and return books
- Silent Study Room
- Sale of stationery items/USB sticks
- Video and CD Players

The Health Library contains in the region of thirty thousand volumes and printed journals (for reference only) purchased by Keele and the NHS, in addition to collections of CDs and DVDs.

Details of opening times can be found on the Library website.

To view more information visit www.keele.ac.uk/healthlibrary/

Using Libraries while on Placement

NHS Libraries in Staffordshire/Shropshire

Shropshire & Staffordshire Health Libraries (SASHA) website provides information about NHS libraries in the region: <http://sashalibrary.nhs.uk>. This information will be useful when you are on placement in Staffordshire/Shropshire.

Shrewsbury Health Library and NHS Libraries in Mid/South Staffordshire and Shropshire also have online Library Catalogues– the SASHA website provides relevant information and links.

Please note: While on placement at an NHS Library you should ask about access to online resources purchased by the NHS: you should register for an NHS ATHENS account.

Don't forget you can check your Keele e-mail account remotely via Keele's WebMail service – this is available via the student information page: <http://students.keele.ac.uk/>

Keele IT Services

Here is a summary of IT Services offered at the Keele Campus (Library & IT Services Building):

- Open access IT Suite and Labs (Campus Library/IT Services Building)
- IT Service Desk for help and advice (open 7 days a week term time)
- Wireless network areas
- Software deals for specialist packages such as SPSS, NVivo
- Scanners
- Self-service printing in both colour and monochrome
- Adjustable disability workstation with scanner

More information available on www.keele.ac.uk/it

Here is a summary of IT services offered at the CEC:

- Open access IT Suite
- IT Service Desk for help and advice
- Scanners
- Self-service printing in both colour and monochrome

Electronic Resources

Many useful resources relating to medicine and health are freely accessible via the Internet, e.g. PubMed, Cochrane Library, the NHS Centre for Reviews and Dissemination, Clinical Evidence, BioMed Central, and FreeMedicalJournals.com.

Keele also offers a growing portfolio of subscription electronic resources, databases, and full-text journals, relating to medicine and health care, e.g. anatomy.tv, AMED, MEDLINE, PsycINFO, BNI, CINAHL, SportDiscus, Academic Search Elite, and ScienceDirect. The University provides access to thousands of online journals, many of which are relevant to medicine and healthcare

Elective placement

The elective period is in Year 5.

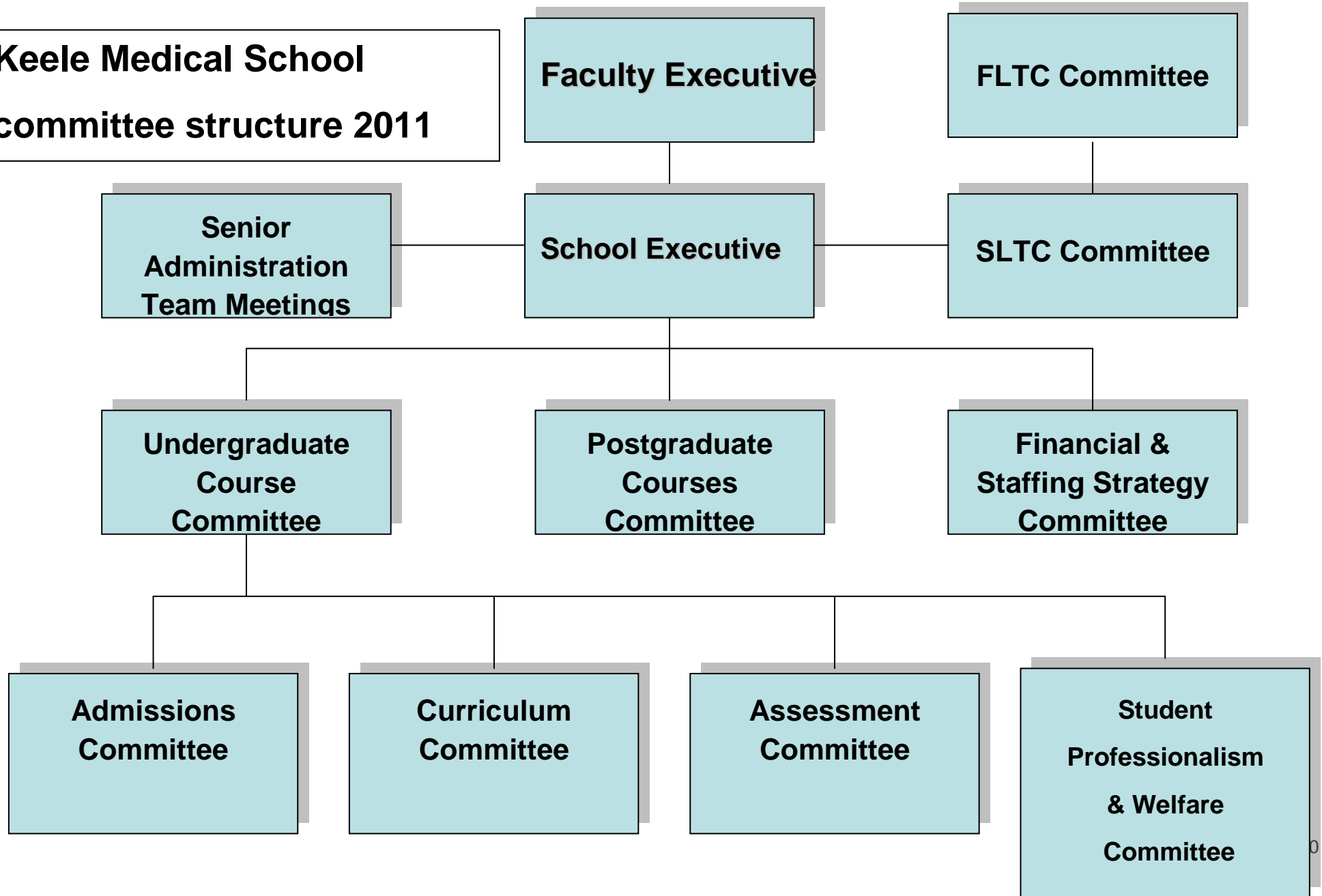
The objectives of the elective periods are to explore fields of medical practice:

- of particular interest to a student.

- in a different health setting.
- that a student feels has been inadequately covered for their own needs by the course.

It is envisaged in most cases then the student will spend the unit at a distant location - possibly overseas. However, subject to previous satisfactory performance, the period will offer maximum flexibility. Students will be encouraged to study any topic of their interest that has relevance to medicine. This could include an attachment to primary care or community facilities such as hospices; all hospital specialities; academic medicine undertaking a period of research; public health; management or other less usual areas such as alternative medicine. Overall support and supervision is provided by the Year 5 leader as well as individual tutors. This period may be used for directed study if the student has been found to be unsatisfactory in assessments in Phase 4, in order to allow successful completion of assessments in time to allow graduation at the end of Year 5.

**Keele Medical School
committee structure 2011**



Quality management

The evidence base informing Quality Management decisions comprise:

- GMC accreditation
- Evaluation by students
- Standards of achievement by student and career success of graduates
- Evaluative data from relevant committees
- External Examiner reports
- Pattern of attrition
- The number of successful completers of the programme
- Management information accessed by the Keele Curriculum Annual Review & Development (CARD) process

Quality review

Evaluation results, feedback and School response

The programme is monitored and reviewed as outlined in the MBChB evaluation strategy flowchart below. This gives students and staff a regular opportunity to express their views and to read the school response and action plan.

Participation

Student participation in focus groups is voluntary, but completion of questionnaires is very strongly encouraged. Students will be reminded of their responsibility to participate in education evaluation, as identified in the Medical School Charter.

Evaluation data gathering

Evaluation method	Year 1	Year 2	Year 3	Year 4	Year 5
On line questionnaires	1 at the end of each semester (2)	1 at the end of each semester (2)	4 spread though the year (4)	4 spread though the year (3)	4 spread though the year (4)
Focus groups	Rolling focus, in response to data				
Student awayday	Annual cross Year student awayday held with faculty members and selection of students from across all the Years.				

Confidentiality

Focus group participation is confidential. This is to be made clear to all participants and written consent to participate is sought at the start of the focus group. All data collected either by questionnaire or focus group will always be anonymised.

Web-based questionnaires

The medical school use web-based questionnaires to provide both quantitative and qualitative data.

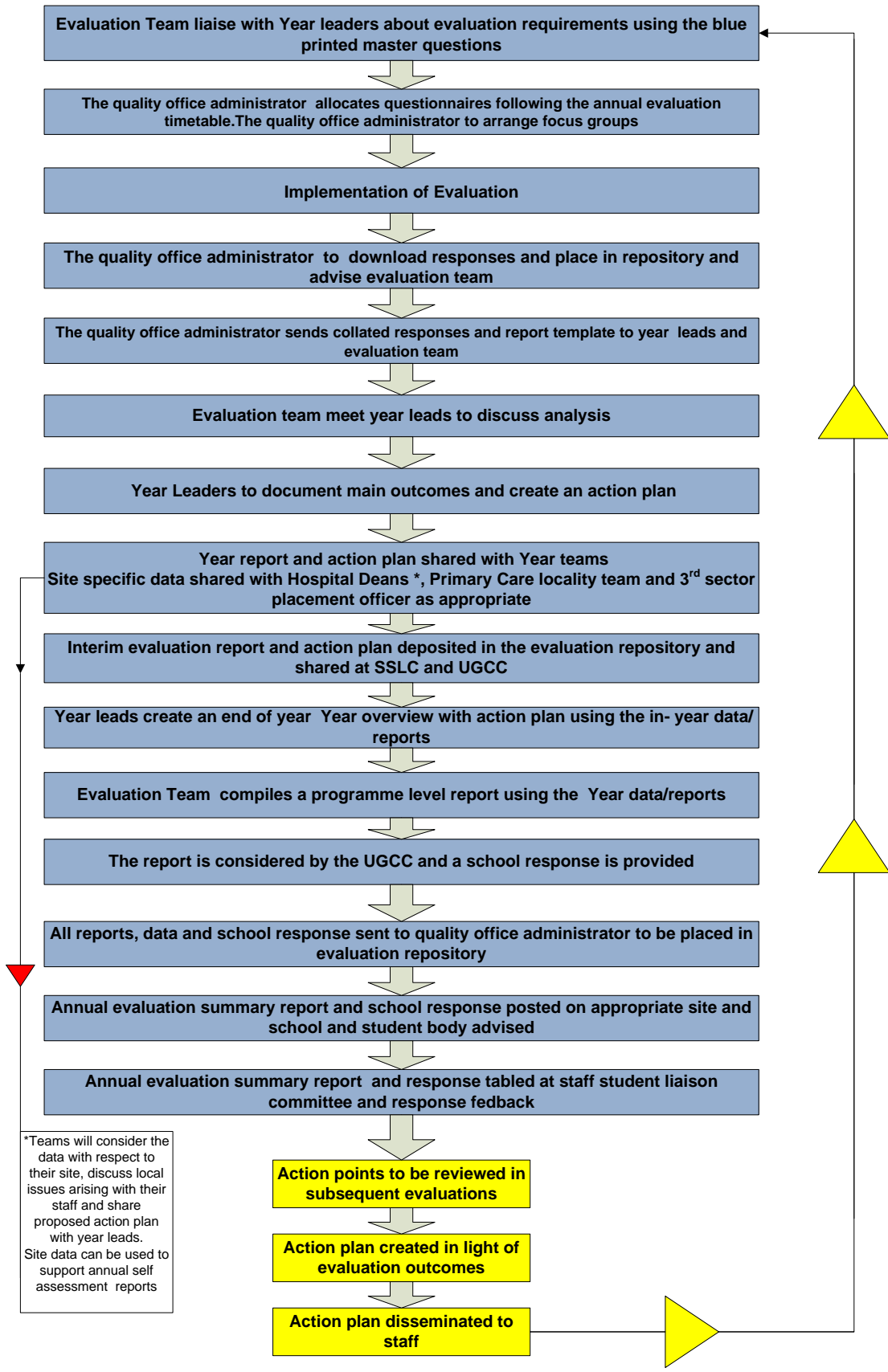
Focus groups

Focus groups are used predominantly with the initial first year Keele curriculum cohort

Results

The final report and School response is tabled for Student Staff liaison Committee, School Learning and Teaching Committee and Undergraduate Course Committee. The relevant part of the evaluation and School response is posted on KLE and students advised.

Evaluation process flowchart 2011



Student representation in the management of the programme.

Every MBChB student has a regular opportunity to give feedback on the course (via online questionnaires and certain focus groups) and is appraised of the school response and action plan in response to student feedback. The student evaluation and action plan is published annually on the Keele Learning Environment.

In addition to this each Year cohort annually elects 2 student Year representatives who liaises with the Year leads about issues and concerns as well as representing their Year at the thrice-yearly Staff/Student Liaison Committee.

Keele University School of Medicine has its own Staff/Student Liaison Committee which meets three times a year. The Committee is chaired by a student representative and composed of student reps from each Year and the different clinical placement sites, senior representatives of the School, both academic and support staff, and staff from each year of the course.

In 2011, the School underwent a reorganisation of its senior committees, with the establishment of new Undergraduate Course, Curriculum, Assessment, and Admissions Committees as well as a Student Professionalism and Welfare Committee. There are 2 student reps on each committee.

In addition, in 2010, the School established an annual student awayday in which student volunteers are invited to meet with School staff members to discuss the programme as well as broader School and University issues. The outcomes of the awayday are published on the Keele Learning Environment. In 2010, 30 students attended this workshop.

The principles of programme design

The MBChB programme described in this document has been drawn up with reference to, and in accordance with, the guidance set out in the following documents which are Indicators of Programme Quality:

- Learning and teaching strategy 2007 – 2010, Keele University, 2007
- Keele assessment strategy, Keele University 2008
- Faculty of health learning and teaching strategy 2007 – 2010 – Keele University – 2007
- Programme specification template code on undergraduate, Keele University, 2009
- The framework for higher education qualifications in England, Wales and Northern Ireland, quality assurance agency for higher education, 2006
- Guidelines pairing programme specifications, quality assurance agency for higher education, 2006
- Tomorrow's doctors 2009, GMC
- Compliance with Keele University's Quality Policy (for more information see: <http://www.keele.ac.uk/depts/aa/qao/qamanual/index.htm>)
- Medical students code on professional values and fitness to practice, GMC March 2009
- Good medical practice, GMC 2006

Date on which programme specification was written or revised

September 2012