

## Course Information Document: Undergraduate

### For students starting in Academic Year 2020/21

#### 1. Course Summary

<b>Names of programme and award title(s)</b>	Medicine MBChB Honours Degree
<b>Award type</b>	Single Honours
<b>Mode of study</b>	Full-time
<b>Framework of Higher Education Qualification (FHEQ) level of final award</b>	Level 6
<b>Normal length of the programme</b>	5 years
<b>Maximum period of registration</b>	The normal length as specified above plus 3 years
<b>Location of study</b>	Hospital - Medical Keele Campus
<b>Accreditation (if applicable)</b>	This programme is accredited by the General Medical Council. For further details see the section on accreditation.
<b>Regulator</b>	Office for Students (OfS); General Medical Council
<b>Tuition Fees</b>	<p><b>UK/EU students:</b></p> <p>Fee for 2020/21 is £9,250*</p> <p><b>International students:</b></p> <p>Fee for 2020/21 is £35,000**</p> <p><i>Bursary information:</i></p> <p>Home (England and Wales) and EU students are eligible for an NHS bursary towards their fees in their 5th year of study not counting repeated years. For Scotland and Northern Ireland, students should check directly with their relevant authority.</p> <p>More information on eligibility can be found on the NHS Bursaries website: <a href="https://www.nhsbsa.nhs.uk/nhs-bursary-students">https://www.nhsbsa.nhs.uk/nhs-bursary-students</a></p> <p>International students are not eligible for the NHS Bursary.</p> <p><i>Placements:</i></p> <p>We will confirm the clinical placement supplement for international students commencing their studies in 2020-21 as soon as possible but must await further guidance from Health Education England.</p>

**How this information might change:** Please read the important information at <http://www.keele.ac.uk/student-agreement/>. This explains how and why we may need to make changes to the information provided in this document and to help you understand how we will communicate with you if this happens.

\* These fees are regulated by Government. We reserve the right to increase fees in subsequent years of study in response to changes in

government policy and/or changes to the law. If permitted by such change in policy or law, we may increase your fees by an inflationary amount or such other measure as required by government policy or the law. Please refer to the accompanying Student Terms & Conditions. Further information on fees can be found at <http://www.keele.ac.uk/studentfunding/tuitionfees/>

\*\* We reserve the right to increase fees in subsequent years of study by an inflationary amount. Please refer to the accompanying Student Terms & Conditions for full details. Further information on fees can be found at <http://www.keele.ac.uk/studentfunding/tuitionfees/>

## 2. Medicine at Keele

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

- Excellent clinical opportunities in primary care and hospital settings across Staffordshire, Shropshire and others adjoining counties
- Excellent 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 clinical as well as biomedical, behavioural and social science topics
- A strong student support system
- A beautiful rural campus, conveniently located in central England.

## 3. Overview of the Programme

***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.

## 4. Aims of the programme

The programme is an innovative, highly integrated, modern medical curriculum, comprising a mixture of core and student-selected components.

Integration occurs at all levels, and the three vertical themes are included in the core and selected elements in all years.

The three themes taken from **Outcomes for Graduates (GMC, 2018)** are:

### **Outcome 1 Professional values and behaviours**

#### ***Professional and ethical responsibilities***

Graduates must:

- behave according to ethical and professional principles
- demonstrate awareness of the importance of their personal physical and mental wellbeing and incorporate compassionate self-care into their personal and professional life

#### ***Legal responsibilities Patient safety and quality improvement***

Graduates must:

- demonstrate knowledge of the principles of the legal framework in which medicine is practised in the jurisdiction in which they are practising, and have awareness of where further information on relevant legislation can be found.

#### ***Patient safety and quality improvement***

Graduates must:

- demonstrate that they can practise safely.
- participate in and promote activity to improve the quality and safety of patient care and clinical outcomes.

#### ***Dealing with complexity and uncertainty***

Graduates must:

- be able to recognise complexity and uncertainty. And, through the process of seeking support and help from colleagues, learn to develop confidence in managing these situations and responding to change

### ***Safeguarding vulnerable patients***

Graduates must:

- be able to recognise and identify factors that suggest patient vulnerability and take action in response.

### ***Leadership and team working***

Graduates must:

- recognise the role of doctors in contributing to the management and leadership of the health service.
- learn and work effectively within a multi-professional and multi-disciplinary team and across multiple care settings. This includes working face to face and through written and electronic means, and in a range of settings where patients receive care, including community, primary, secondary, mental health, specialist tertiary and social care settings and in patients' homes.

## **Outcome 2 Professional skills**

### ***Communication and interpersonal skills***

Graduates must:

- be able to communicate effectively, openly and honestly with patients, their relatives, carers or other advocates, and with colleagues, applying patient confidentiality appropriately.
- be able to carry out an effective consultation with a patient.

### ***Diagnosis and medical management***

Graduates must:

- work collaboratively with patients and colleagues to diagnose and manage clinical presentations safely in community, primary and secondary care settings and in patients' homes.
- wherever possible, support and facilitate patients to make decisions about their care and management.
- be able to perform a range of diagnostic, therapeutic and practical procedures safely and effectively, and identify, according to their level of skill and experience, the procedures for which they need supervision to ensure patient safety.
- be able to work collaboratively with patients, their relatives, carers or other advocates to make clinical judgements and decisions based on a holistic assessment of the patient and their needs, priorities and concerns, and appreciating the importance of the links between pathophysiological, psychological, spiritual, religious, social and cultural factors for each individual.
- demonstrate that they can make appropriate clinical judgements when considering or providing compassionate interventions or support for patients who are nearing or at the end of life.
- understand the need to involve patients, their relatives, carers or other advocates in management decisions, making referrals and seeking advice from colleagues as appropriate.
- be able to give immediate care to adults, children and young people in medical and psychiatric emergencies and seek support from colleagues if necessary.
- be able to recognise when a patient is deteriorating and take appropriate action.

### ***Prescribing medications safely***

Graduates must:

- be able to prescribe medications safely, appropriately, effectively and economically and be aware of the common causes and consequences of prescribing errors.

### ***Using information effectively and safely***

Graduates must:

- be able to use information effectively and safely in a medical context, and maintain accurate, legible, contemporaneous and comprehensive medical records.

## **Outcome 3 Professional knowledge**

### ***The health service and healthcare systems in the four countries***

Graduates must:

- demonstrate how patient care is delivered in the health service.

### ***Applying biomedical scientific principles***

Graduates must:

- be able to apply biomedical scientific principles, methods and knowledge to medical practice and integrate these into patient care. This must include principles and knowledge relating to anatomy, biochemistry, cell biology, genetics, genomics and personalised medicine, immunology, microbiology, molecular biology, nutrition, pathology, pharmacology and clinical pharmacology, and physiology.

#### ***Applying psychological principles***

Graduates must:

- explain and illustrate by professional experience the principles for the identification, safe management and referral of patients with mental health conditions.

#### ***Applying social science principles***

Graduates must:

- be able to apply social science principles, methods and knowledge to medical practice and integrate these into patient care.

#### ***Health promotion and illness prevention***

Graduates must:

- be able to apply the principles, methods and knowledge of population health and the improvement of health and sustainable healthcare to medical practice.

#### ***Clinical research and scholarship***

Graduates must:

- be able to apply scientific method and approaches to medical research and integrate these with a range of sources of information used to make decisions for care.

#### [Image of the Keele Spiral Curriculum](#)

**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.

Further information about the Keele Graduate Attributes can be found here: <http://www.keele.ac.uk/distinctive/keelegraduateattributes/>.

### ***Objectives***

The MBChB 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 **Outcomes for Graduates** (GMC, 2018), the duties of a doctor are set out in the GMC document **Good Medical Practice** (GMC, 2013).

## **Good Medical Practice (GMC,2013).**

Patients must be able to trust doctors with their lives and health. To justify that trust you must show respect for human life and make sure your practice meets the standards expected of you in four domains.

### **Knowledge, skills and performance**

- Make the care of your patient your first concern.
- Provide a good standard of practice and care.
- Keep your professional knowledge and skills up to date.
- Recognise and work within the limits of your competence.

### **Safety and quality**

- Take prompt action if you think that patient safety, dignity or comfort is being compromised.
- Protect and promote the health of patients and the public.

### **Communication, partnership and teamwork**

- Treat patients as individuals and respect their dignity.
- Treat patients politely and considerately.
- Respect patients' right to confidentiality.
- Work in partnership with patients.
- Listen to, and respond to, their concerns and preferences.
- Give patients the information they want or need in a way they can understand.
- Respect patients' right to reach decisions with you about their treatment and care.
- Support patients in caring for themselves to improve and maintain their health.
- Work with colleagues in the ways that best serve patients' interests.

### **Maintaining trust**

- Be honest and open and act with integrity.
- Never discriminate unfairly against patients or colleagues.
- Never abuse your patients' trust in you or the public's trust in the profession.

You are personally accountable for your professional practice and must always be prepared to justify your decisions and actions.

[http://www.gmc-uk.org/guidance/good\\_medical\\_practice.asp](http://www.gmc-uk.org/guidance/good_medical_practice.asp)

## **5. What you will learn**

### **Intended learning outcomes**

The GMC have published 'Outcomes for Graduates' (June 2018) and a supplementary list of procedures (see below). All medical school courses will be required to meet these outcomes by 2020.

### **Professional Values & Behaviours**

<b>Outcomes 2018</b>
<b>Overarching outcome for graduates</b>
1. Medical students are tomorrow's doctors. In accordance with good medical practice, newly qualified doctors must make the care of patients their first concern, applying their knowledge and skills in a competent, ethical and professional manner and taking responsibility for their own actions in complex and uncertain situations.
<b>Professional values and behaviours</b>
We expect newly qualified doctors to demonstrate appropriate generic personal and professional values and behaviours. They must keep to our ethical guidance and standards, good medical practice and the explanatory guidance, which together describe what is expected of all doctors who are registered with us.
<b>Professional and ethical responsibilities</b>
<b>2. Newly qualified doctors must behave according to ethical and professional principles. They must be able to:</b>
2a. demonstrate awareness of the clinical responsibilities and role of the doctor
2b. demonstrate compassionate professional behaviour and their professional responsibilities in making sure the fundamental needs of patients are addressed
2c. summarise the current ethical dilemmas in medical science and healthcare practice; the ethical issues that can arise in everyday clinical decision-making; and apply ethical reasoning to situations which may be encountered in the first years after graduation
2d. maintain confidentiality and respect patients' dignity and privacy
2e. act with integrity, be polite, considerate, trustworthy and honest
2f. take personal and professional responsibility for their actions
2g. manage their time and prioritise effectively
2h. recognise and acknowledge their own personal and professional limits and seek help from colleagues and supervisors when necessary, including when they feel that patient safety may be compromised
2i. protect patients from any risk posed by their own health including: - the risks to their health and to patient safety posed by self-prescribing medication and substance misuse - the risks to their health and to patient safety posed by fatigue - they must apply strategies to limit the impact of fatigue on their health
2j. recognise the potential impact of their attitudes, values, beliefs, perceptions and personal biases (which may be unconscious) on individuals and groups and identify personal strategies to address this
2k. demonstrate the principles of person-centred care and include patients and, where appropriate, their relatives, carers or other advocates in decisions about their healthcare needs
2l. explain and demonstrate the importance of: - seeking patient consent, or the consent of the person who has parental responsibility in the case of children and young people, or the consent of those with lasting power of attorney or independent mental capacity advocates if appropriate - providing information about options for investigations, treatment and care in a way that enables patients to make decisions about their own care - assessing the mental capacity of a patient to make a particular decision, including when the lack of capacity is temporary, and knowing when and how to take action
2m. act appropriately, with an inclusive approach, towards patients and colleagues
2n. be open and honest in their interactions with patients, colleagues and employers when things go wrong - known as the professional duty of candour
2o. raise and escalate concerns through informal communication with colleagues and through formal clinical governance and monitoring systems about: - patient safety and quality of care - bullying, harassment and undermining
2p. explain and demonstrate the importance of professional development and lifelong learning and demonstrate commitment to this
2q. work effectively and appropriately as a mentor and teacher for other learners in the multi-professional team
2r. respect patients' wishes about whether they wish to participate in the education of learners
2s. access and analyse reliable sources of current clinical evidence and guidance and have established methods for making sure their practice is consistent with these

2t. explain and demonstrate the importance of engagement with revalidation, including maintaining a professional development portfolio which includes evidence of reflection, achievements, learning needs and feedback from patients and colleagues

2u. engage in their induction and orientation activities, learn from experience and feedback, and respond constructively to the outcomes of appraisals, performance reviews and assessments

**3. Newly qualified doctors must demonstrate awareness of the importance of their personal physical and mental wellbeing and incorporate compassionate self-care into their personal and professional life. They must demonstrate awareness of the need to:**

3a. self-monitor, self-care and seek appropriate advice and support, including by being registered with a GP and engaging with them to maintain their own physical and mental health

3b. manage the personal and emotional challenges of coping with work and workload, uncertainty and change

3c. develop a range of coping strategies, such as reflection, debriefing, handing over to another colleague, peer support and asking for help, to recover from challenges and set-backs

#### **Legal responsibilities**

**4. Newly qualified doctors must demonstrate knowledge of the principles of the legal framework in which medicine is practised in the jurisdiction in which they are practising, and have awareness of where further information on relevant legislation can be found. NOTE: To be read in conjunction with our supplementary guidance on legislation which sets out specific areas of legislation that we expect newly qualified doctors to be able to understand the principles of.**

explain and demonstrate the importance of engagement with revalidation, including maintaining a professional development portfolio which includes evidence of reflection, achievements, learning needs and feedback from patients and colleagues

access and analyse reliable sources of current clinical evidence and guidance and have established methods for making sure their practice is consistent with these

engage in their induction and orientation activities, learn from experience and feedback, and respond constructively to the outcomes of appraisals, performance reviews and assessments.

#### **Patient safety and quality improvement**

**5. Newly qualified doctors must demonstrate that they can practise safely. They must participate in and promote activity to improve the quality and safety of patient care and clinical outcomes. They must be able to:**

5a. place patients' needs and safety at the centre of the care process.

5b. promote and maintain health and safety in all care settings and escalate concerns to colleagues where appropriate, including when providing treatment and advice remotely

5c. recognise how errors can happen in practice and that errors should be shared openly and be able to learn from their own and others' errors to promote a culture of safety

5d. apply measures to prevent the spread of infection, and apply the principles of infection prevention and control

5e. describe the principles of quality assurance, quality improvement, quality planning and quality control, and in which contexts these approaches should be used to maintain and improve quality and safety

5g. apply the principles and methods of quality improvement to improve practice (for example, plan, do, study, act or action research), including seeking ways to continually improve the use and prioritisation of resources

5f. describe basic human factors principles and practice at individual, team, organisational and system levels and recognise and respond to opportunities for improvement to manage or mitigate risks

5g. apply the principles and methods of quality improvement to improve practice (for example, plan, do, study, act or action research), including seeking ways to continually improve the use and prioritisation of resources

5h. describe the value of national surveys and audits for measuring the quality of care

#### **Dealing with complexity and uncertainty**

**6. The nature of illness is complex and therefore the health and care of many patients is complicated and uncertain. Newly qualified doctors must be able to recognise complexity and uncertainty. And, through the process of seeking support and help from colleagues, learn to develop confidence in managing these situations and responding to change. They must be able to:**

6a. recognise the complex medical needs, goals and priorities of patients, the factors that can affect a patient's health and wellbeing and how these interact. These include psychological and sociological considerations that can also affect patients' health

6b. identify the need to adapt management proposals and strategies for dealing with health problems to take into consideration patients' preferences, social needs, multiple morbidities, frailty and long term physical and mental conditions

6c. demonstrate working collaboratively with patients, their relatives, carers or other advocates, in planning their care, negotiating and sharing information appropriately and supporting patient self-care

6d. demonstrate working collaboratively with other health and care professionals and organisations when working with patients, particularly those with multiple morbidities, frailty and long term physical and mental conditions

6e. recognise how treatment and care can place an additional burden on patients and make decisions to reduce this burden where appropriate, particularly where patients have multiple conditions or are approaching the end of life

6f. manage the uncertainty of diagnosis and treatment success or failure and communicate this openly and sensitively with patients, their relatives, carers or other advocates

6g. evaluate the clinical complexities, uncertainties and emotional challenges involved in caring for patients who are approaching the end of their lives and demonstrate the relevant communication techniques and strategies that can be used with the patient, their relatives, carers or other advocates.

### **Safeguarding vulnerable patients**

**7. Newly qualified doctors must be able to recognise and identify factors that suggest patient vulnerability and take action in response. They must be able to:**

7a. identify signs and symptoms of abuse or neglect and be able to safeguard children, young people, adults and older people, using appropriate systems for sharing information, recording and raising concerns, obtaining advice, making referrals and taking action

7b. take a history that includes consideration of the patient's autonomy, views and any associated vulnerability, and reflect this in the care plan and referrals

7c. assess the needs of and support required for children, young people and adults and older people who are the victims of domestic, sexual or other abuse

7d. assess the needs of, and support required, for people with a learning disability

7e. assess the needs of, and support required, for people with mental health conditions

7f. adhere to the professional responsibilities in relation to procedures performed for non-medical reasons, such as female genital mutilation and cosmetic interventions

7g. explain the application of health legislation that may result in the deprivation of liberty to protect the safety of individuals and society

7h. recognise where addiction (to drugs, alcohol, smoking or other substances), poor nutrition, self-neglect, environmental exposure, or financial or social deprivation are contributing to ill health. And take action by seeking advice from colleagues and making appropriate referrals

7i. describe the principles of equality legislation in the context of patient care

### **Leadership and team working**

**8. Newly qualified doctors must recognise the role of doctors in contributing to the management and leadership of the health service. They must be able to:**

8a. describe the principles of how to build teams and maintain effective team work and interpersonal relationships with a clear shared purpose.

8b. undertake various team roles including, where appropriate, demonstrating leadership and the ability to accept and support leadership by others

8c. identify the impact of their behaviour on others

8d. describe theoretical models of leadership and management that may be applied to practice.

**9. Newly qualified doctors must learn and work effectively within a multi-professional and multi-disciplinary team and across multiple care settings. This includes working face to face and through written and electronic means, and in a range of settings where patients receive care, including community, primary, secondary, mental health, specialist tertiary and social care settings and in patients' homes. They must be able to:**

9a. demonstrate their contribution to effective interdisciplinary team working with doctors from all care settings and specialties, and with other health and social care professionals for the provision of safe and high-quality care



- 9b. work effectively with colleagues in ways that best serve the interests of patients. This includes:
- safely passing on information using clear and appropriate spoken, written and electronic communication:
  - at handover in a hospital setting and when handing over and maintaining continuity of care in primary, community and social care settings
  - when referring to colleagues for investigations or advice
  - when things go wrong, for example when errors happen
  - questioning colleagues during handover where appropriate
  - working collaboratively and supportively with colleagues to share experiences and challenges that encourage learning
  - responding appropriately to requests from colleagues to attend patients
  - applying flexibility, adaptability and a problem-solving approach to shared decision making with colleagues

9c. recognise and show respect for the roles and expertise of other health and social care professionals and doctors from all specialties and care settings in the context of working and learning as a multi-professional team.

**Professional Skills**

**We expect doctors to demonstrate appropriate skills in clinical practice.**

**Communication and interpersonal skills**

**10. Newly qualified doctors must be able to communicate effectively, openly and honestly with patients, their relatives, carers or other advocates, and with colleagues, applying patient confidentiality appropriately. They must be able to:**

- 10a. communicate clearly, sensitively and effectively with patients, their relatives, carers or other advocates, and colleagues from medical and other professions, by:
- listening, sharing and responding
  - demonstrating empathy and compassion
  - demonstrating effective verbal and non-verbal interpersonal skills
  - making adjustments to their communication approach if needed, for example for people who communicate differently due to a disability or who speak a different first language
  - seeking support from colleagues for assistance with communication if needed

- 10b. communicate by spoken, written and electronic methods (including in medical records) clearly, sensitively and effectively with patients, their relatives, carers or other advocates, and colleagues from medical and other professions. This includes, but is not limited to, the following situations:
- where there is conflict or disagreement
  - when sharing news about a patient's condition that may be emotionally challenging for the patient and those close to them
  - when sharing news about a patient's death with relatives and carers or other advocates
  - when discussing issues that may be sensitive for the patient, such as alcohol consumption, smoking, diet and weight management or sexual behaviour
  - when communicating with people who lack insight into their illness or are ambivalent about treatment
  - when communicating with children and young people
  - when communicating with people who have impaired hearing, language, speech or sight
  - when communicating with people who have cognitive impairment
  - when communicating with people who have learning disabilities
  - when English is not the patient's first language - by using an interpreter, translation service or other online methods of translation
  - when the patient lacks capacity to reach or communicate a decision on their care needs
  - when advocating for patients' needs
  - when making referrals to colleagues from medical and other professions
  - when providing care remotely, such as carrying out consultations using telecommunications.

10c. use methods of communication used by patients and colleagues such as technology-enabled communication platforms, respecting confidentiality and maintaining professional standards of behaviour

**11. Newly qualified doctors must be able to carry out an effective consultation with a patient. They must be able to:**

- 11a. elicit and accurately record a patient's medical history, including family and social history, working with parents and carers or other advocates when the patient is a child or young person or an adult who requires the support of a carer or other advocate
- 11b. encourage patients' questions, discuss their understanding of their condition and treatment options, and take into account their ideas concerns, expectations, values and preferences
- 11c. acknowledge and discuss information patients have gathered about their conditions and symptoms, taking a collaborative approach
- 11d. provide explanation, advice and support that matches patients' level of understanding and needs, making reasonable adjustments to facilitate patients' understanding if necessary
- 11e. assess a patient's capacity to understand and retain information and to make a particular decision, making reasonable adjustments to support their decision making if necessary, in accordance with legal requirements in the relevant jurisdiction and the GMC's ethical guidance as appropriate

11f. work with patients, or their legal advocates, to agree how they want to be involved in decision making about their care and treatment

11g. describe the principles of holding a fitness for work conversation with patients, including assessing social, physical, psychological and biological factors supporting the functional capacity of the patient, and how to make referrals to colleagues and other agencies.

### **Diagnosis and medical management**

**12. Newly qualified doctors must work collaboratively with patients and colleagues to diagnose and manage clinical presentations safely in community, primary and secondary care settings and in patients' homes. Newly qualified doctors must, wherever possible, support and facilitate patients to make decisions about their care and management.**

**13. Newly qualified doctors must be able to perform a range of diagnostic, therapeutic and practical procedures safely and effectively, and identify, according to their level of skill and experience, the procedures for which they need supervision to ensure patient safety.**

**14. Newly qualified doctors must be able to work collaboratively with patients, their relatives, carers or other advocates to make clinical judgements and decisions based on a holistic assessment of the patient and their needs, priorities and concerns, and appreciating the importance of the links between pathophysiological, psychological, spiritual, religious, social and cultural factors for each individual.**

**They must be able to:**

14a. propose an assessment of a patient's clinical presentation, integrating biological, psychological and social factors, agree this with colleagues and use it to direct and prioritise investigations and care

14b. safely and sensitively undertake:

- an appropriate physical examination (with a chaperone present if appropriate)
- a mental and cognitive state examination, including establishing if the patient is a risk to themselves or others, seeking support and making referrals if necessary
- a developmental examination for children and young people

14c. interpret findings from history, physical and mental state examinations

14d. propose a holistic clinical summary, including a prioritised differential diagnosis/diagnoses and problem list

14e. propose options for investigation, taking into account potential risks, benefits, cost effectiveness and possible side effects and agree in collaboration with colleagues if necessary, which investigations to select

14f. interpret the results of investigations and diagnostic procedures, in collaboration with colleagues if necessary

14g. synthesise findings from the history, physical and mental state examinations and investigations, in collaboration with colleagues if necessary, and make proposals about underlying causes or pathology

14h. understand the processes by which doctors make and test a differential diagnosis and be prepared to explain their clinical reasoning to others

14i. make clinical judgements and decisions with a patient, based on the available evidence, in collaboration with colleagues and as appropriate for their level of training and experience, and understand that this may include situations of uncertainty

14j. take account of patients' concerns, beliefs, choices and preferences, and respect the rights of patients to reach decisions with their doctor about their treatment and care and to refuse or limit treatment

14k. seek informed consent for any recommended or preferred options for treatment and care

14l. propose a plan of management including prevention, treatment, management and discharge or continuing community care, according to established principles and best evidence, in collaboration with other health professionals if necessary

14m. support and motivate the patient's self-care by helping them to recognise the benefits of a healthy lifestyle and motivating behaviour change to improve health and include prevention in the patient's management plan

14n. recognise the potential consequences of over-diagnosis and over-treatment

**15. Newly qualified doctors must demonstrate that they can make appropriate clinical judgements when considering or providing compassionate interventions or support for patients who are nearing or at the end of life. They must understand the need to involve patients, their relatives, carers or other advocates in management decisions, making referrals and seeking advice from colleagues as appropriate.**

**16. Newly qualified doctors must be able to give immediate care to adults, children and young people in medical and psychiatric emergencies and seek support from colleagues if necessary.**

**17. Newly qualified doctors must be able to recognise when a patient is deteriorating and take appropriate action. They must be able to:**

17a. Assess and recognise the severity of a clinical presentation and a need for immediate emergency care

17b. diagnose and manage acute medical and psychiatric emergencies, escalating appropriately to colleagues for assistance and advice
17c. provide immediate life support
17d. perform cardiopulmonary resuscitation.
<b>Prescribing medicines safely</b>
<b>18. Newly qualified doctors must be able to prescribe medications safely, appropriately, effectively and economically and be aware of the common causes and consequences of prescribing errors. They must be able to:</b>
18a. establish an accurate medication history, covering both prescribed medication and other drugs or supplements, and establish medication allergies and the types of medication interactions that patients experience
18b. carry out an assessment of benefit and risk for the patient of starting a new medication taking into account the medication history and potential medication interactions in collaboration with the patient and, if appropriate, their relatives, carers or other advocates
18c. provide patients, their relatives, carers or other advocates, with appropriate information about their medications in a way that enables patients to make decisions about the medications they take
18d. agree a medication plan with the patient that they are willing and able to follow
18e. access reliable information about medications and be able to use the different technologies used to support prescribing
18f. calculate safe and appropriate medication doses and record the outcome accurately
18g. write a safe and legal prescription, tailored to the specific needs of individual patients, using either paper or electronic systems and using decision support tools where necessary
18h. describe the role of clinical pharmacologists and pharmacists in making decisions about medications and prescribe in consultation with these and other colleagues as appropriate
18i. communicate appropriate information to patients about what their medication is for, when and for how long to take it, what benefits to expect, any important adverse effects that may occur and what follow-up will be required
18j. detect and report adverse medication reactions and therapeutic interactions and react appropriately by stopping or changing medication
18k. monitor the efficacy and effects of medication and with appropriate advice from colleagues, reacting appropriately by adjusting medication, including stopping medication with due support, care and attention if it proves ineffective, is no longer needed or the patient wishes to stop taking it
18l. recognise the challenges of safe prescribing for patients with long term physical and mental conditions or multiple morbidities and medications, in pregnancy, at extremes of age and at the end of life
18m. respect patient choices about the use of complementary therapies, and have a working knowledge of the existence and range of these therapies, why patients use them, and how this might affect the safety of other types of treatment that patients receive
18n. recognise the challenges of delivering these standards of care when prescribing and providing treatment and advice remotely, for example via online services
18o. recognise the risks of over-prescribing and excessive use of medications and apply these principles to prescribing practice
<b>Using information effectively and safely</b>
<b>19. Newly qualified doctors must be able to use information effectively and safely in a medical context, and maintain accurate, legible, contemporaneous and comprehensive medical records. They must be able to:</b>
19a. make effective use of decision making and diagnostic technologies
19b. apply the requirements of confidentiality and data protection legislation and comply with local information governance and storage procedures when recording and coding patient information
19c. explain their professional and legal responsibilities when accessing information sources in relation to patient care, health promotion, giving advice and information to patients, and research and education
19d. discuss the role of doctors in contributing to the collection and analysis of patient data at a population level to identify trends in wellbeing, disease and treatment, and to improve healthcare and healthcare system
19e. apply the principles of health informatics to medical practice
<b>Professional knowledge</b>

**We expect newly qualified doctors to demonstrate their knowledge through scholarly application to the care of patients in practice. Newly qualified doctors must recognise biomedical, psychological and social science principles of health and disease, and integrate and apply scholarly principles to the care of patients. Newly qualified doctors must understand the patient journey through the full range of health and social care settings.**

**The health service and healthcare systems in the four countries**

**20. Newly qualified doctors must demonstrate how patient care is delivered in the health service. They must be able to:**

20a. describe and illustrate from their own professional experience the range of settings in which patients receive care, including in the community, in patients' homes and in primary and secondary care provider settings

20b. explain and illustrate from their own professional experience the importance of integrating patients' care across difference settings to ensure person-centred care

20c. describe emerging trends in settings where care is provided, for example the shift for more care to be delivered in the community rather than in secondary care settings

20d. describe the relationship between healthcare and social care and how they interact

**21 Newly qualified doctors must recognise that there are differences in healthcare systems across the four nations of the UK and know how to access information about the different systems, including the role of private medical services in the UK.**

**Applying biomedical scientific principles**

**22. Newly qualified doctors must be able to apply biomedical scientific principles, methods and knowledge to medical practice and integrate these into patient care. This must include principles and knowledge relating to anatomy, biochemistry, cell biology, genetics, genomics and personalised medicine, immunology, microbiology, molecular biology, nutrition, pathology, pharmacology and clinical pharmacology, and physiology. They must be able to:**

22a. explain how normal human structure and function and physiological processes applies, including at the extremes of age, in children and young people and during pregnancy and childbirth

22b. explain the relevant scientific processes underlying common and important disease processes

22c. justify, through an explanation of the underlying fundamental principles and clinical reasoning, the selection of appropriate investigations for common clinical conditions and diseases

22d. 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

22e. describe medications and medication actions: therapeutics and pharmacokinetics; medication side effects and interactions, including for multiple treatments, long term physical and mental conditions and non-prescribed drugs; the role of pharmacogenomics and antimicrobial stewardship

22f. analyse clinical phenomena and conduct appropriate critical appraisal and analysis of clinical data, and explain clinical reasoning in action and how they formulate a differential diagnosis and management plan

**Applying psychological principles**

**23. Newly qualified doctors must explain and illustrate by professional experience the principles for the identification, safe management and referral of patients with mental health conditions. They must be able to:**

23a. describe and illustrate from examples the spectrum of normal human behaviour at an individual level

23b. integrate psychological concepts of health, illness and disease into patient care and apply theoretical frameworks of psychology to explain the varied responses of individuals, groups and societies to disease

23c. explain the relationship between psychological and medical conditions and how psychological factors impact on risk and treatment outcome

23d. describe the impact of patients' behaviours on treatment and care and how these are influenced by psychological factors

23e. describe how patients adapt to major life changes, such as bereavement, and the adjustments that might occur in these situations

23f. identify appropriate strategies for managing patients with substance misuse or risk of self-harm or suicide

23g. explain how psychological aspects of behaviour, such as response to error, can influence behaviour in the workplace in a way that can affect health and safety and apply this understanding to their personal behaviours and those of colleagues.

**Applying social science principles**

**24. Newly qualified doctors must be able to apply social science principles, methods and knowledge to medical practice and integrate these into patient care. They must be able to:**

24a. recognise how society influences and determines the behaviour of individuals and groups and apply this to the care of patients
24b. review the sociological concepts of health, illness and disease and apply these to the care of patients
24c. apply theoretical frameworks of sociology to explain the varied responses of individuals, groups and societies to disease
24d. recognise sociological factors that contribute to illness, the course of the disease and the success of treatment and apply these to the care of patients ħ including issues relating to health inequalities and the social determinants of health, the links between occupation and health, and the effects of poverty and affluence
24e. explain the sociological aspects of behavioural change and treatment concordance and compliance, and apply these models to the care of patients as part of person-centred decision making.
<b>Health promotion and illness prevention</b>
<b>25. Newly qualified doctors must be able to apply the principles, methods and knowledge of population health and the improvement of health and sustainable healthcare to medical practice. They must be able to:</b>
25a. explain the concept of wellness or wellbeing as well as illness, and be able to help and empower people to achieve the best health possible, including promoting lifestyle changes such as smoking cessation, avoiding substance misuse and maintaining a healthy weight through physical activity and diet
25b. describe the health of a population using basic epidemiological techniques and measurements.
25c. evaluate the environmental, social, behavioural and cultural factors which influence health and disease in different populations
25d. assess, by taking a history, the environmental, social, psychological, behavioural and cultural factors influencing a patient's presentation, and identify options to address these, including advocacy for those who are disempowered
25e. apply epidemiological data to manage healthcare for the individual and the community and evaluate the clinical and cost effectiveness of interventions
25f. outline the principles underlying the development of health, health service policy, and clinical guidelines, including principles of health economics, equity, and sustainable healthcare
25g. apply the principles of primary, secondary and tertiary prevention of disease, including immunisation and screening
25h. evaluate the role of ecological, environmental and occupational hazards in ill-health and discuss ways to mitigate their effects
25i. apply the basic principles of communicable disease control in hospital and community settings, including disease surveillance
25j. discuss the role and impact of nutrition to the health of individual patients and societies
25k. evaluate the determinants of health and disease and variations in healthcare delivery and medical practice from a global perspective and explain the impact that global changes may have on local health and wellbeing
<b>Clinical research and scholarship</b>
<b>26. Newly qualified doctors must be able to apply scientific method and approaches to medical research and integrate these with a range of sources of information used to make decisions for care. They must be able to:</b>
26a. explain the role and hierarchy of evidence in clinical practice and decision making with patients
26b. interpret and communicate research evidence in a meaningful way for patients to support them in making informed decisions about treatment and management
26c. describe the role and value of qualitative and quantitative methodological approaches to scientific enquiry
26d. interpret common statistical tests used in medical research publications
26e. critically appraise a range of research information including study design, the results of relevant diagnostic, prognostic and treatment trials, and other qualitative and quantitative studies as reported in the medical and scientific literature
26f. formulate simple relevant research questions in biomedical science, psychosocial science or population science, and design appropriate studies or experiments to address the questions
26g. describe basic principles and ethical implications of research governance including recruitment into trials and research programmes
26h. describe stratified risk
26i. describe the concept of personalised medicine to deliver care tailored to the needs of individual patients
26j. use evidence from large scale public health reviews and other sources of public health data to inform decisions about the care of individual patients

<b>Assessment of patient needs</b>			
<b>No</b>	<b>Procedure</b>	<b>Description</b>	<b>Level of competence</b>
1	Take baseline physiological observations and record appropriately	Measure temperature, respiratory rate, pulse rate, blood pressure, oxygen saturations and urine output.	Safe to practise under indirect supervision
2	Carry out peak expiratory flow respiratory function test	Explain to a patient how to perform a peak expiratory flow, assess that it is performed adequately and interpret results.	Safe to practise under indirect supervision
3	Perform direct ophthalmoscopy	Perform basic ophthalmoscopy and identify common abnormalities.	Safe to practise under indirect supervision
4	Perform otoscopy	Perform basic otoscopy and identify common abnormalities.	Safe to practise under indirect supervision
<b>Diagnostic procedures</b>			
5	Take blood cultures	Take samples of venous blood to test for the growth of infectious organisms.	Safe to practise under direct supervision
6	Carry out arterial blood gas and acid base sampling from the radial artery in adults	Insert a needle into a patient's radial artery (in the wrist) to take a sample of arterial blood and interpret the results.	Safe to practise under direct supervision
7	Carry out venepuncture	Insert a needle into a patient's vein to take a sample of blood for testing. Make sure that blood samples are taken in the correct order, placed in the correct containers, that these are labelled correctly and sent to the laboratory promptly.	Safe to practise under indirect supervision
8	Measure capillary blood glucose	Measure the concentration of glucose in the patient's blood at the bedside using appropriate equipment. Record and interpret the results.	Safe to practise under indirect supervision
9	Carry out a urine multi dipstick test	Explain to patient how to collect a midstream urine sample. Test a sample of urine to detect abnormalities. Perform a pregnancy test where appropriate.	Safe to practise under indirect supervision
10	Carry out a 3- and 12-lead electrocardiogram	Set up a continuous recording of the electrical activity of the heart, ensuring that all leads are correctly placed.	Safe to practise under indirect supervision
11	Take and/or instruct patients how to take a swab	Use the correct technique to apply sterile swabs to the nose, throat, skin and wounds. Make sure that samples are placed in the correct containers, that these are labelled correctly and sent to the laboratory promptly and in the correct way.	Safe to practise under indirect supervision for nose, throat, skin or wound swabs
<b>Patient care</b>			
12	Perform surgical scrubbing up	Follow approved processes for cleaning hands and wearing appropriate personal protective equipment before procedures or surgical operations.	Safe to practise under direct supervision
13	Set up an infusion	Set up and run through an intravenous infusion. Have awareness of the different equipment and devices used.	Safe to practise under direct supervision
14	Use correct techniques for moving and handling, including patients who are frail	Use, or direct other team members to use, approved methods for moving, lifting and handling people or objects, in the context of clinical care, using methods that avoid injury to patients, colleagues, or oneself.	Safe to practise under indirect supervision
<b>Prescribing</b>			
15	Instruct patients in the use of devices for inhaled medication	Explain to a patient how to use an inhaler correctly, including spacers, and check that their technique is correct.	Safe to practise under indirect supervision
16	Prescribe and administer oxygen	Prescribe and administer oxygen safely using a delivery method appropriate for the patient's needs and monitor and adjust oxygen as needed.	Safe to practise under indirect supervision

17	Prepare and administer injectable (intramuscular, subcutaneous, intravenous) drugs	Prepare and administer injectable drugs and prefilled syringes.	Safe to practise under direct supervision
<b>Therapeutic procedures</b>			
18	Carry out intravenous cannulation	Insert a cannula into a patient's vein and apply an appropriate dressing.	Safe to practise under direct supervision
19	Carry out safe and appropriate blood transfusion	Following the correct procedures, give a transfusion of blood (including correct identification of the patient and checking blood groups). Observe the patient for possible reactions to the transfusion, and take action if they occur.	Experienced in a simulated setting; further training required before direct supervision
20	Carry out male and female urinary catheterisation	Insert a urethral catheter in both male and female patients.	Safe to practise under direct supervision
21	Carry out wound care and basic wound closure and dressing	Provide basic care of surgical or traumatic wounds and apply dressings appropriately.	Safe to practise under direct supervision
22	Carry out nasogastric tube placement	Pass a tube into the stomach through the nose and throat for feeding and administering drugs or draining the stomach's contents. Know how to ensure correct placement.	Safe to practise in simulation
23	Use local anaesthetics	Inject or topically apply a local anaesthetic. Understand maximum doses of local anaesthetic agents.	Safe to practise under direct supervision

## 6. How is the programme taught?

Learning medicine relies on methods that are clinically realistic. This programme achieves this by offering students many and varied learning opportunities: Problem/Case Based Learning, lectures, practicals, experiential learning and extensive clinical placements.

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.

The curriculum has three phases jointly delivered at the University and in primary and secondary care settings.

- Phase 1: Years 1 & 2:** Overview with early clinical exposure. There is an emphasis on learning the fundamentals of biomedical, behavioural and social science with a focus on -sciences, research, study skills and communication skills, basic clinical skills, and professionalism
- Phase 2: Years 3 & 4:** A second run through many aspects of biomedical, behavioural and social science with an increased emphasis on complexity and pathology, combined with learning fundamental clinical skills and knowledge. Immersion in clinical placements building on the foundations of clinical knowledge and skills developed in the preceding years.
- Phase 3: Preparation for Professional Practice: Year 5:** Very extensive student assistantships to prepare students for practice as Foundation Year 1 doctors.

### Educational strategies

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

#### Key Features:

- A spiral curriculum, with vertical themes running through the 5 years.
- Scheduled learning and teaching activities
- Anatomy teaching based in the Dissection Room
- Problem Based/Case based Learning
- Extensive clinical placements in hospital and community settings
- Guided Independent Study

### Location

- Years 1 and 2 are predominantly based at Keele campus. The majority of clinical placements in Years 3 - 5 are based in Staffordshire and Shropshire. For some students there are a small number of placements in adjoining counties.

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

Apart from these formal activities, students are also provided with regular opportunities to talk through particular areas of difficulty, and any special learning needs they may have, with their Personal Tutors or lecturers on a one-to-one basis.

## 7. 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.

In 2018, the Keele Medical School had approximately a 2:1 ratio between medical and non-medical academic staff, as well as a ratio of approximately 1:3 between full-time and part-time staff.

The University will attempt to minimise changes to our core teaching teams, however, delivery of the programme depends on having a sufficient number of staff with the relevant expertise to ensure that the programme is taught to the appropriate academic standard.

Staff turnover, for example where key members of staff leave, fall ill or go on research leave, may result in changes to the programme's content. The University will endeavour to ensure that any impact on students is limited if such changes occur.

## 8. What is the structure of the Programme?

The academic year runs from September to June (Years 1 and 2) and September to July (Year 3), and August to July (Years 4 and 5).

Our degree courses are organised into modules. Each module is a self-contained unit of study and each 1 credit = 10 hours of student effort. An outline of the structure of the programme is provided in the tables below, with an indicative example of a week.

<b>A spiral curriculum, with vertical themes running through the 5 years. Scheduled learning and teaching activities. Problem Based/Case based Learning. Extensive clinical placements in general practice, hospital and community settings.</b>					
<b>Phase 1:</b>					
Overview with early clinical exposure. There is an emphasis on the foundations of biomedical, behavioural and social science knowledge and scholarship skills, embedded in a framework of clinical placements and basic clinical skills.					
<b>Year 1 FHEQ Level 4 (120 credits)</b>					
Learning through integrated units such as Health & Disease, Immunology and infection, Emergencies, Life Course, Scholarship, Brain & Mind, Pregnancy and Lifestyle, with longitudinal GP and hospital placements					
<b>Indicative timetable</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
<b>AM</b>	<b>Pbl session</b>	<b>Lectures and seminars</b>	<b>Clinical skills sessions</b>	<b>Lectures and experiential learning sessions</b>	<b>Pbl session</b>
<b>PM</b>	<b>Lab practicals and seminars</b>	<b>Early clinical placement</b>	<b>Sports afternoon</b>	<b>Anatomy</b>	<b>End of week wrap up</b>
<b>Year 2 FHEQ Level 5 (120 credits)</b>					
A second run through many aspects of biomedical, behavioural and social science with an increased emphasis on complexity and pathology. Learning through integrated units such as Mechanism of Disease, Inputs & Outputs, Movement & Trauma, Circulation, Scholarship, Breath of Life, Sensory Motor systems, longitudinal GP and hospital placements and a 3rd sector community placement					



Indicative timetable	Monday	Tuesday	Wednesday	Thursday	Friday	
AM	Lab practical's and seminars	Anatomy sessions	Lectures and seminars	Clinical skills sessions	Pbl session & End of week wrap up	
PM	Clinical skills sessions	Lectures and experiential learning sessions	Sports afternoon	Early clinical placement	Pbl session	
<b>Optional Intercolated Bachelor's Degree * (see below)</b>						
<p><b>Phase 2</b></p> <p>Comprehensive, scientifically-based clinical learning in a phase-long spiral of primary and secondary care placements, building on the foundations of clinical knowledge and skills through immersion in clinical placements.</p>						
<b>Professional values and behaviours</b>	<b>Year 3 FHEQ Level 6 (120 credits)</b>					
	Learning through integrated units such as Medicine, Surgery, Elderly Care, Mental Health, Paediatrics, General Practice and a Student-Selected Component.					
<b>Professional skills</b>	<b>Year 3 FHEQ Level 6 (120 credits)</b>					
	Learning through integrated units such as Medicine, Surgery, Elderly Care, Mental Health, Paediatrics, General Practice and a Student-Selected Component.					
<b>Professional knowledge</b>	Indicative timetable	Monday	Tuesday	Wednesday	Thursday	Friday
	AM	Case based learning session	Clinical placement	Clinical skills session	Anatomy & pathology sessions	Clinical placement
	PM	Clinical placement	Clinical placement	Clinical placement	Lectures and seminars	
<b>Year 4 FHEQ Level 6 (120 credits)</b>						
Learning through integrated units such as Medicine, Surgery, Women's Health, Mental Health, Paediatrics, Neurology/musculoskeletal and then a General Practice and a Student-Selected Component.						
<b>Professional knowledge</b>	Indicative timetable	Monday	Tuesday	Wednesday	Thursday	Friday
	AM	Case illustrated learning session	Clinical placement	Clinical skills session	Seminars	Clinical placement
	PM	Clinical placement	Clinical placement	Clinical placement	Clinical placement	Lectures
<b>Optional Intercolated Master's Degree * (see below)</b>						
<p><b>Phase 3</b></p> <p>Very extensive student assistantships to prepare students for practice as Foundation Year 1 doctors in GP assistantship, Acute and Critical Care (emergency medicine, Intensive care unit &amp; anaesthesia), Medicine student assistantship, Surgical student assistantship, Distant elective and a Preparation for Professional Practice week</p>						
<b>Year 5 FHEQ Level 6 (120 credits)</b>						
Preparation for Professional Practice: Including some evening and weekend working						
<b>Professional knowledge</b>	Indicative timetable	Monday	Tuesday	Wednesday	Thursday	Friday

	AM	Clinical placement	Clinical placement	Clinical placement (Cluster group learning - GP)	Clinical placement	Clinical placement
	PM	Clinical placement	Clinical placement	Clinical placement	Clinical placement (Cluster group project- GP)	Clinical placement

Year	Compulsory	Optional		Electives	
		Min	Max	Min	Max
Level 4	120	0	0	0	0
Level 5	120	0	0	0	0
Level 6	360	0	0	0	0

## Module Lists

### Level 4

Compulsory modules	Module Code	Credits	Period
UG MEDICINE YEAR 1	MED-10008	120	Semester 1-2

### Level 5

Compulsory modules	Module Code	Credits	Period
UG MEDICINE YEAR 2	MED-20001	120	Semester 1-2

### Level 6

Compulsory modules	Module Code	Credits	Period
UG MEDICINE YEAR 3	MED-30001	120	Semester 1-2
UG MEDICINE YEAR 4	MED-30002	120	Semester 1-2
UG MEDICINE YEAR 5	MED-30003	120	Semester 1-2

\*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 Master's 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 following an application from the student. <https://www.keele.ac.uk/medicine/intercalateddegrees/>

For further information on the content of modules currently offered please visit: <https://www.keele.ac.uk/recordsandexams/modulecatalogue/>

## 9. Final and intermediate awards

### Transfer routes / exit points

The end award is MBChB (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 a classified BSc Honours Degree in Applied Medical Sciences. These intermediate awards imply no eligibility for professional recognition or registration, or fitness to practise.

Credits required for each level of academic award are as follows:

<b>MBChB</b>	600 credits	You will require 120 credits from each taught year of the programme: Med-10008: 120 credits at level 4 Med-20008: 120 credits at level 5 Med-30001: 120 credits at level 6 Med-30002: 120 credits at level 6 Med-30003: 120 credits at level 6
<b>BSc Honours Degree in Applied Medical Sciences</b>	360 credits	You will require at least 120 credits at levels 4, 5 and 6
<b>Diploma in Higher Education in Applied Medical Sciences</b>	240 credits	You will require at least 120 credits at level 4 or higher and at least 120 credits at level 5 or higher
<b>Certificate in Higher Education in Applied Medical Sciences</b>	120 credits	You will require at least 120 credits at level 4 or higher

## 10. How is the Programme Assessed?

The School of Medicine has an integrated and comprehensive assessment programme that reflects the broad range of knowledge and skills that are developed as you progress through the degree programme. Teaching staff pay particular attention to specifying clear assessment criteria and providing timely, regular and constructive feedback that helps to clarify things you did not understand and helps you to improve your performance. The overarching aims of the assessment programme are to:

- Assist students to achieve the learning objectives of the medical programme.
- Facilitate the development in students of the learning skills necessary to maintain currency in later professional practice.
- Provide evidence of the extent to which students have achieved the learning objectives of the course.
- Employ assessment practices that reflect current, evidence-based, best practice.
- Align with the curriculum in both content and process and to assess knowledge, skills and attitudes in an integrated manner.
- Provide high quality feedback to all students after both formative and summative assessments.
- Follow a process of blueprinting to ensure appropriate sampling of material reflecting common international assessment practices.

### Assessment Formats

The School uses a variety of assessment formats throughout the programme. These include both written and practical assessments. Examples of written assessments include Single Best Answer (SBA) questions, Extended Matching Questions (EMQs) and free text Short Answer Questions (SAQs). Examples of practical assessments include Objective Structured Clinical Examinations (OSCEs) and various Workplace Based Assessments (WBA). This list is not exhaustive; other formats may be used to support specific years of the course.

Some assessments will be purely formative as their primary purpose is to provide feedback to students on their learning progress. Other assessments will be summative as their primary purpose is to inform decision making about a student's capacity to proceed to the next year of the course or to graduate. Feedback will still be offered after summative assessments in order to encourage students to continually improve their performance. Feedback is provided in a variety of ways, including via an online *Feedback Portal*, through one to one meetings with tutors and via small and large group sessions. In C2018, Year 1 and Year 2 students will receive feedback on their assessment as part of their regular meetings with their PBL tutors.

### Assessment methods

The medical school utilizes a range of assessment modes appropriate to assess each of the Intended Learning Objectives of the programme, categorized across three domains; Professional values and behaviours, Professional skills and Professional knowledge.

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

Professional values and behaviours	Professional skills		Professional knowledge
	Information Management Skills	Clinical and Practical Skills	
Learning portfolio MSF (Multi Source Feedback) Reflective summaries Appraisal	Written Communication skills	Practical assessment of skills (OSCE/WBA)	Knowledge assessments

The modes of assessment include:

### Written knowledge examinations.

Knowledge is examined in a range of formats designed to test students' ability to apply relevant scientific and medical knowledge to professional practice. Examinations may consist of Single Best Answer (SBA) questions, Extended Matching Questions (EMQ) and free text Short Answer Questions (SAQs). Written knowledge examinations will draw upon the principles of both cumulative testing and progress testing. Feedback will be given following all assessments to guide student learning.

In Phase 1, students will be tested at regular intervals, typically 3-4 times per year. The cumulative score from these assessments will then be used to determine progression to the next year/phase of the programme.

In Phase 2, students will be tested at regular points throughout the year (typically 3-4 tests per year) and these tests are used to determine progression to the next year/phase of the programme.

In Phase 3 there are currently no written summative university assessments.

However, students will be required to sit any national assessment required for entry to the Foundation Training Programme or as specified by the General Medical Council (GMC).

### Practical examinations

These examinations enable students to demonstrate a safe and effective application of practical clinical and laboratory skills and will be assessed through both Objective Structured Clinical Examinations (OSCEs) and a variety of Workplace Based Assessments (WBAs). Typically, students will be assessed at 2-3 points within each year. Feedback will be given after all assessments to guide student learning.

### In course assessments

A variety of in course assessments will be used to test students' ability to apply a range of skills relevant to their professional practice. Examples of this format include written assessments designed to test students' ability to appraise quantitative or qualitative data and those designed to develop students' reflective practice. These assessments may also include oral and poster presentations designed to test students' ability to communicate effectively to a variety of audiences.

## 11. Contact Time and Expected Workload

This contact time measure is intended to provide you with an indication of the type of activity you are likely to undertake during this programme. The data is compiled based on module choices and learning patterns of students on similar programmes in previous years. Every effort is made to ensure this data is a realistic representation of what you are likely to experience, but changes to programmes, teaching methods and assessment methods mean this data is representative and not specific.

Undergraduate courses at Keele contain an element of module choice; therefore, individual students will experience a different mix of contact time and assessment types dependent upon their own individual choice of modules. The figures below are an example of activities that a student may expect on your chosen course by year/stage of study. Contact time includes scheduled activities such as: lecture, seminar, tutorial, project supervision, demonstration, practical classes and labs, supervised time in labs/workshop, fieldwork and external visits. The figures are based on 1,200 hours of student effort each year for full-time students.

### Activity

	Scheduled learning and teaching activities	Guided independent Study	Placements
Year 1 (Level 4)	43%	54%	3%
Year 2 (Level 5)	43%	50%	7%
Year 3 (Level 6)	29%	15%	56%
Year 4 (Level 6)	27%	8%	65%
Year 5 (Level 6)	11%	13%	76%

## 12. Accreditation

This programme is accredited by the General Medical Council and Keele University (December 2011). Please note the following:

**Module Selection:** Students should note that to be awarded the MBChB accreditation they must pass all modules. All modules are mandatory. (NB: Module = Year)

**Regulations:** Your programme has professional accreditation and there are specific regulations, which you have to agree to abide by, as follows:

**GMC:** Outcomes for graduates: [https://www.gmc-uk.org/education/undergraduate/undergrad\\_outcomes.asp](https://www.gmc-uk.org/education/undergraduate/undergrad_outcomes.asp)

**Study abroad:** due to GMC accreditation requirements there are no Study Abroad options available to students on this programme.

## 13. University Regulations

The University Regulations form the framework for learning, teaching and assessment and other aspects of the student experience. Further information about the University Regulations can be found at: <http://www.keele.ac.uk/student-agreement/>

### Course Regulations:

MBChB Programme - please see Regulation C5 <https://www.keele.ac.uk/regulations/regulationc5/> and University Regulation D1 <https://www.keele.ac.uk/regulations/regulationd1/>

The following are important elements of the MBChB course-specific regulation:

- Full attendance is required on the MBChB programme. Students are expected to attend all timetabled sessions of the programme, as specified in each year pro forma, to include theoretical - learning hours, clinical placements, other environment placements and associated briefings.
- Progression decisions will be based on student performance in a range of assessments and satisfactory professional behaviour.
- Students will be required to have successfully completed each year of the course before progressing to the next year of study.
- There will be no "in-year" resit options in years 1 and 2 (Phase 1) except for students who have missed a summative assessment through exceptional circumstances. See progression table below. Students who fail to progress from year 1 or year 2 at the first attempt will have an opportunity to repeat the year.
- In year 3 who fail to meet the expected standard in relation to written knowledge tests will be required to sit a supplementary test at the end of the year.
- In year 4 students who fail to meet the expected standard in relation to written knowledge tests will be required to resit the year.
- Work will be submitted for assessment as prescribed in course and year handbooks. Deadlines specified for submitting assessments are rigorously enforced: work submitted up to 24 hours after the deadline may be graded with the mark capped at the pass score; work submitted more than 24 hours after the deadline will score 0 (zero) and re-assessment will be required.
- Students registered on the MBChB Honours degree programme are subject to the University Fitness to Practise procedure (Regulation B.5).

Progression MBChB programme						
	Compulsory Formative	Portfolio	Written Minimum requirement	OSCE Minimum requirement	Rule	Do not meet progression requirements
Year 1	Satisfactory engagement with in course formative assessments		Cumulative pass in written knowledge assessments	Pass as defined annually in the student handbook	No compensation between written assessments and OSCE. Must meet all minimum requirements to progress to Year 2	If performance in assessments is unsatisfactory at the first attempt of the year, then there is an automatic right to resit (repeat) the year.  There is no 'in year' resit.
Year 2	Satisfactory engagement with in course formative assessments	Portfolio: Must be deemed Satisfactory at Appraisal in order to progress to the next Year.	Cumulative pass in written knowledge assessments.	Pass as defined annually in the student handbook	No compensation between written assessments and OSCE. Must meet all minimum requirements to progress to Year 3.	If performance in assessments is unsatisfactory at the first attempt of the year, then there is an automatic right to resit (repeat) the year.  There is no 'in year' resit.
Year 3	Satisfactory engagement with in course formative assessments	Portfolio: Must be deemed Satisfactory at Appraisal in order to progress to the next Year.	Pass written knowledge assessments.	Pass as defined annually in the student handbook	No compensation between written assessments and OSCE. Must meet all minimum requirements to progress to Year 4.	Students who fail to meet the expected standard in relation to written knowledge tests will be required to sit a supplementary test at the end of the year.
Year 4	Satisfactory engagement with in course formative assessments	Portfolio must be deemed Satisfactory at Appraisal in order to progress to the next Year.	Pass written knowledge assessments.	Pass as defined annually in the student handbook	No compensation between written assessments and OSCE. Must meet all minimum requirements to progress to Year 5.	Students who fail to meet the expected standard in relation to written knowledge tests will be required to resit the year.
Year 5	Satisfactory engagement with in course formative assessments	Portfolio must be deemed Satisfactory at Appraisal in order to progress	N/A	Pass a minimum of stations as defined annually in the student handbook.		If performance in assessments is unsatisfactory there is an automatic 'in year' resit.  There is no automatic resit of year.

## 14. Other Learning Opportunities

Due to GMC accreditation requirements there are no Study Abroad options available to students on this programme.

## 15. Additional Costs

### Medicine Programme Costs

In common with other Medical Schools our medical students should be aware that there are additional costs involved, such as the purchase of books, laboratory coats and travel to placements. We do not usually recommend that students purchase books or equipment before starting the course as advice will be given at Registration and during the degree as to what is required. Students intending to bring a car to Campus should note that student car parking is limited and there is a charge for student permits. An additional cost applicable to Medical Students is the purchase of smart clothing for clinical placements.

## Keele School of Medicine MBChB placement information.

Secondary Care, Primary Care and 3rd sector placements are mainly based across Staffordshire and Shropshire, and neighbouring counties including some in Herefordshire, Cheshire, Worcestershire and Powys. These placements provide a range of experiences integral to the course's learning outcomes. All students are required to travel, and attend their allocated placements as a course requirement. Every effort is made to balance the travel burden for each student over the 5 year course, but it is not possible to give every student placements that involves limited travel.

In Years 3, 4 and 5 students will be allocated to a Secondary Care base site for that academic year, either Royal Stoke University Hospital or Royal Shrewsbury Hospital, most students will be required to spend one year (Either Year 4 or 5) based in Shropshire.

Activity	Estimated cost
Equipment: Howie lab coat and a standard lab coat	£35
Travel: Indicative mileage for placements years 1-5: Students can expect to travel an average of 5696* miles over the course of the 5 year programme .  Mileage is calculated from Keele School of Medicine for Years 1 and 2 and from the allocated base secondary care site for year 3, 4 and 5. (either Royal Stoke University Hospital or Royal Shrewsbury Hospital)  *Based on 2016 graduates  Applicants will be required to pay for an enhanced DBS check and there may also be additional costs associated with immunisations.	
Other additional costs: Students may need to pay for any additional DBS checks required by elective placement coordinators.	£44

These costs have been forecast by the University as accurately as possible but may be subject to change as a result of factors outside of our control (for example, increase in costs for external services). Forecast costs are reviewed on an annual basis to ensure they remain representative. Where additional costs are in direct control of the University we will ensure increases do not exceed 5%.

As to be expected there will be additional costs for inter-library loans and potential overdue library fines, print and graduation. We do not anticipate any further costs for this undergraduate programme.

### Assistance with expenses

The School is not able to offer a firm commitment to provide assistance with travel expenses but if external bodies agree funding, usually decided year by year, this will be allocated at the end of the year. The mechanism and amount to be advised each year dependent on funds available. For example, in 2018-19 each student retrospectively received 16.8p per mile as a contribution towards their travel costs\* undertaken in Years 3, 4 and 5.

\*Certain events are not included in this mileage total, such as SSC Placements and travel to County Hospital, Stafford.

Home students may gain in additional financial support for travel expenses if eligible for an NHS bursary (Means tested) and some costs associated with the Year 5 Elective Placement may also be covered in this.

Overseas and EU students are not eligible for NHS bursary support.

### Allocation method:

In the first instance all placements are allocated at random, thereafter the School aims to avoid sending a student to the same placement twice and be mindful of previous allocations re distance. The notable exception to this rule is that students in Years 2, 3 and 4 rank their Student Selected Component (SSC) options and an allocation is made using this ranking, irrespective of previous allocations.

In order to ensure that placements are allocated in an equitable manner, and that the most effective use is made of available placements, it is not possible for students to choose their own placements. However, students are given the opportunity to request a specific area to undertake their Primary Care placement in Year 3, 4 and 5 to help with accommodation/travel costs.

Also in Years 3, 4 and 5, there is an opportunity, once the School allocation plan has been shared with students, for students to submit for consideration by the year leads a mutually acceptable swap. There is a clearly defined process and timeline to do this available on the KLE (Keele Virtual Learning Environment).

### Accessibility

Most placements can be accessed using public transport. In the case of the more inaccessible placements, the School attempts to place students, who have declared they have access to a car, to such placements.

### **Special or exceptional circumstances**

The intention regarding allocation is to balance the travel burden across the student body but the School may make allowances for certain special or exceptional circumstances that may define the allocation for that student namely:

**Criterion 1:** You are a parent or legal guardian of a child or children under the age of 18, who reside primarily with you or from whom you have significant caring responsibilities.

**Criterion 2:** You are the primary carer for someone who is disabled (as defined by the Equality Act 2010)

**Criterion 3:** The applicant has a medical condition or disability for which ongoing follow up for the condition in the specified location is an absolute requirement.

**Criterion 4:** The applicant has a unique circumstance.

**Criterion 5:** The Medical School may allocate on the basis of educational need

The applicant must provide documentary evidence to support any allowance considered by the School.

*In addition to the above, the School requires students to identify where he/she or a close relative has had previous or current engagement with the allocated GP practice.*

## **Version History**

### **This document**

**Date Approved:** 20 December 2019

### **Previous documents**

<b>Version No</b>	<b>Year</b>	<b>Owner</b>	<b>Date Approved</b>	<b>Summary of and rationale for changes</b>
1	2019/20	PETER COVENTRY	20 December 2019	