

**PROGRAMME SPECIFICATION**

<b>1</b>	<b>Awarding Institution</b>	Newcastle University
<b>2</b>	<b>Teaching Institution</b>	Newcastle University & NUMed Malaysia
<b>3</b>	<b>Final Award</b>	MBBS
<b>4</b>	<b>Programme Title</b>	Medicine and Surgery
<b>5</b>	<b>UCAS/Programme Code</b>	A100 & A101 (UK) & 1500U (NUMed)
<b>6</b>	<b>Programme Accreditation</b>	General Medical Council, Malaysian Medical Council & Malaysian Qualification Agency
<b>7</b>	<b>QAA Subject Benchmark(s)</b>	Medicine
<b>8</b>	<b>FHEQ Level</b>	7
<b>9</b>	<b>Last updated</b>	May 2022

**10 Programme Aims**

The primary aim of undergraduate medical education in Newcastle is to produce graduates who are fit to practise in accordance with the professional standards set by the GMC for all doctors. We deliver an educational experience of sufficient range, depth and rigour to provide students with the intellectual tools, knowledge and understanding, practical skills and professional attitudes required for clinical practice as an F1 doctor and beyond.

The aim of the Newcastle MBBS programme is to produce excellent doctors who:

- are compassionate and skilled practitioners
- provide safe, individualised care based on a sound knowledge of health, disease and society
- work in a professional manner
- are equipped to work as part of, and to lead a multi-professional health care team
- are prepared for on-going professional and personal development and, through this, are able to adapt to future developments in practice
- are well prepared to succeed in their medical career

To achieve this aim, the Board of Medical Studies seeks to make operational the commitments of the University in meeting regional and national needs in relation to medical education by:

1. Providing a flexible programme that is responsive to the changing needs of the Health Service and its patients
2. Recruiting and admitting motivated students of high calibre with a demonstrable commitment to medicine and the provision of high-quality health care
3. Ensuring that the participation and contribution made by students from non-traditional backgrounds is encouraged and developed
4. Engendering an educational environment conducive to the development of a reflective approach to medical practice that is patient-centred, questioning and self-critical
5. Developing links and exploiting opportunities for inter-professional education in order to develop team working and engender an integrated approach to health care delivery
6. Ensuring currency of provision by delivering programmes, the structure and content of which is informed by the needs of a modernising Health Service, inter-professional consensus, statutory recommendation, research and clinical audit.

A graduate from Newcastle Medical School will:

1. Demonstrate an ability to think critically, a proficiency in clinical reasoning, an insight into research and scientific method, a resourcefulness and creativity, and an ability to cope with uncertainty.
2. Possess an integrated core knowledge of biomedical, behavioural, population and clinical knowledge relevant to the understanding and management of problems and conditions encountered in the first year of the postgraduate Foundation Programme.
3. Possess a range of generic (transferable) skills which are expected of all university graduates
4. Demonstrate competence in those core clinical, interpersonal, and practical/technical skills relevant to the commencement of the postgraduate Foundation Programme and in line with the GMC's 'Outcomes for Graduates'.
5. Demonstrate appropriate professional behaviours in relation to all aspects of clinical practice.
6. Demonstrate attitudes consistent with 'Duties of a Doctor' as defined by the GMC in 'Good Medical Practice'.
7. Be able to broaden academic, individual and professional perspectives through study.

For those choosing to step aside from their mainstream studies to intercalate one year of study, additional objectives are set to ensure that graduates:

1. Gain an early introduction to basic research skills and method;
2. Develop understanding of the research process through the conduct of a research project of an original nature.

## **11 Learning Outcomes**

The programme provides opportunities for students to develop and demonstrate the skills, professional qualities, knowledge and understanding and other attributes required of a medical graduate entering the Foundation Programme (UK) or House Officer Programme (Malaysia).

The learning outcomes for the MBBS programme are defined as a set of terminal learning outcomes that reflect the GMC "Outcomes for Graduates". It is expected that throughout the five years of the course students will be working towards these terminal outcomes. All individual learning outcomes at each stage of the course and all assessments are mapped to the appropriate terminal learning outcomes/outcomes for graduates.

### Knowledge and Understanding

The knowledge and Understanding outcomes for UK medical graduates are stated with the GMC's "outcomes for Graduates" under Outcomes 1: The doctor as a scholar and a scientist ([http://www.gmc-uk.org/education/undergraduate/undergrad\\_outcomes\\_1.asp](http://www.gmc-uk.org/education/undergraduate/undergrad_outcomes_1.asp))

1. The graduate will be able to 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. The graduate will be able to:
  - a. Explain normal human structure and functions.
  - b. Explain the scientific bases for common disease presentations.
  - c. Justify the selection of appropriate investigations for common clinical cases.
  - d. Explain the fundamental principles underlying such investigative techniques.
  - e. 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.
  - f. 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.
  - g. Make accurate observations of clinical phenomena and appropriate critical analysis of clinical data.
2. Apply psychological principles, method and knowledge to medical practice.
  - a. Explain normal human behaviour at an individual level.
  - b. Discuss psychological concepts of health, illness and disease.
  - c. Apply theoretical frameworks of psychology to explain the varied responses of individuals, groups and societies to disease.
  - d. Explain psychological factors that contribute to illness, the course of the disease and the success of treatment.
  - e. Discuss psychological aspects of behavioural change and treatment compliance.
  - f. Discuss adaptation to major life changes, such as bereavement; comparing and contrasting the abnormal adjustments that might occur in these situations.
  - g. Identify appropriate strategies for managing patients with dependence issues and other demonstrations of self-harm.
3. Apply social science principles, method and knowledge to medical practice.
  - a. Explain normal human behaviour at a societal level.
  - b. Discuss sociological concepts of health, illness and disease.
  - c. Apply theoretical frameworks of sociology to explain the varied responses of individuals, groups and societies to disease.
  - d. 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.
  - e. Discuss sociological aspects of behavioural change and treatment compliance.
4. Apply to medical practice the principles, method and knowledge of population health and the improvement of health and healthcare.
  - a. Discuss basic principles of health improvement, including the wider determinants of health, health inequalities, health risks and disease surveillance.
  - b. Assess how health behaviours and outcomes are affected by the diversity of the patient population.
  - c. Describe measurement methods relevant to the improvement of clinical effectiveness and care.
  - d. Discuss the principles underlying the development of health and health service policy, including issues relating to health economics and equity, and clinical guidelines.
  - e. Explain and apply the basic principles of communicable disease control in hospital and community settings.
  - f. Evaluate and apply epidemiological data in managing healthcare for the individual and the community.

- g. Recognise the role of environmental and occupational hazards in ill-health and discuss ways to mitigate their effects.
  - h. Discuss the role of nutrition in health.
  - i. Discuss the principles and application of primary, secondary and tertiary prevention of disease.
  - j. Discuss from a global perspective the determinants of health and disease and variations in healthcare delivery and medical practice.
5. Apply scientific method and approaches to medical research.
- a. 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.
  - b. Formulate simple relevant research questions in biomedical science, psychosocial science or population science, and design appropriate studies or experiments to address the questions.
  - c. Apply findings from the literature to answer questions raised by specific clinical problems.
  - d. Understand the ethical and governance issues involved in medical research.

### **Teaching and Learning Methods**

Teaching and learning strategies are primarily student-centred and designed to enable achievement and demonstration of the learning outcomes. Students are expected to take responsibility for their learning from early in the course, while teachers guide, support and facilitate the process.

The overall approach can be best described as one of guided discovery. Students are actively involved in the exploration of knowledge and take responsibility for mastering the content needed for understanding themselves.

Key features include the provision of:

- A motivational context for learning based upon early clinical experience and application of knowledge.
- A well-structured core knowledge base, focused upon integrated, multi-disciplinary cases.
- Clearly articulated learning outcomes for each unit of study as well as the course overall.
- A student-centred approach, which encourages the adoption of a problem-oriented, self-motivating learning style and promotes active learning through self-study.
- The opportunity for interaction and the exploration of knowledge and its clinical application in small groups.
- The opportunity to study an area of choice in more detail.

To ensure a problem-first, task-based focus to learning, a case-led approach is adopted. The cases used reflect the range of core clinical presentations and problems which will be encountered by graduates. The cases are used to contextualise the subsequent teaching and learning process focused on the underlying key concepts and mechanisms, and it is mastering these that should be the aim rather than simply the clinical entity itself.

#### ***Specific teaching and learning methods***

Throughout the programme, the choice of teaching and learning method is tailored to the student's stage of development and prior experience. Specific learning experiences are differentiated according to the particular outcome to be achieved, i.e., the learning experience is set in the professional context best suited to facilitating the achievement of the desired outcome.

Most students entering Year 1 of the five-year programme are in a transitional phase from earlier educational experiences and benefit from a learning environment that has clear structure. Less familiar teaching and learning methods are introduced in a progressive manner as students gain experience and confidence. Through the five years of the programme, the teaching and learning strategies encourage, and ultimately require, the student to adopt increasing self-reliance and independence in their study and learning. The

learning and teaching strategy employed for Year 1 of the Accelerated MBBS programme is matched to the maturity and prior experience of the students. From the outset learning is student-centred, case-led and contextual.

The following teaching and learning methods are used to enable students to achieve outcomes relating to knowledge and understanding.

- Large class plenary sessions (e.g., lectures, clinical demonstrations and case presentations) are used, particularly in Year 1 and 2 of the five-year programme, to present cases, to explain complex concepts and to provide early insight into the relationship between basic and clinical science and practice.
- Small group tutorials and seminars are used to provide opportunities for interaction, discussion and clarification in support of learning in selected areas.
- Small-group clinical teaching is used for experiential learning in hospital and community care settings
- Practical classes: to develop knowledge and understanding.
- Guided self-study, supported by the provision of learning outcomes and direction in Study Guides and e-learning packages, to expand knowledge and understanding.

### **Assessment Strategy**

#### ***General assessment strategy***

Our system of assessment is designed to monitor acquisition and utilisation of core knowledge, skills and professional behaviour necessary for the student's first experience of clinical practice as a Foundation Programme doctor. A student is therefore required to pass each domain of assessment, as outlined in the Stage Handbooks, in order to progress to the next Year of the course and ultimately the Foundation Programme. The assessments explicitly test achievement of the defined learning outcomes as set out in the Degree Programme Handbook and relevant Study Guides. In line with the overall design of the curriculum, all assessments reflect the integrated and interdisciplinary nature of the programme.

The following modes/instruments are used to assess knowledge and understanding within the programme.

- Single Best Answer questions (SBA)
- Short Answer case-based (open response)
- WriSkE (Written Skills Examination)
- Written assignments
- Oral Presentations
- OSCE (Objective Structured Clinical Examination)
- Multiple Observed Structured Long Examination Records (MOSLER)
- Clinical Encounter Reports (supervisors and members of the clinical team)
- Workplace based assessment of practical clinical skills (clinical encounters)
- Monitoring of professional attitudes and behaviours
- Clinical Logbooks
- E-Portfolio

### **Intellectual Skills**

On completing the programme students should be able to:

1. Demonstrate proficiency in clinical reasoning, through ability to:
  - a. recognise, define and prioritise problems
  - b. analyse, interpret and prioritise information, recognising its limitations
2. Make diagnosis
  - a. Describe the differential diagnosis of core conditions
3. Demonstrate ability to think critically, by
  - b. adopting an inquisitive and questioning attitude and applying rational processes
  - c. recognising irrationality in oneself and others
  - d. recognising importance of own value judgements and those of patients

4. Demonstrate insight into research & scientific method, through the:
  - a. appreciation of quantitative and qualitative methodology
  - b. choosing and applying appropriate methodologies and statistical tests with some understanding of the underlying principles
  - c. recognising the relationship between evidence-based medicine, audit and the observed variation in clinical practice
5. Exhibit creativity / resourcefulness, by:
  - a. demonstrating self-reliance, initiative and pragmatism
  - b. demonstrating preparedness to think out with conventional boundaries when appropriate

#### **Teaching and Learning Methods**

The following teaching and learning methods are used to enable students to achieve outcomes relating to appropriate skills of decision making, clinical reasoning and judgement:

- Problem-oriented learning opportunities: to develop problem-solving, numeracy, critical reasoning and clinical decision-making skills through data handling and evidence-based activities.
- Practical classes: to develop skills in scientific and clinical method.
- Project work: working in small groups to collectively produce material for presentation in written and oral format.
- Written assignments, project work and Student-Selected Components: to promote individual investigative and exploratory study.
- Clinical attachments where the development of diagnostic and clinical reasoning skills is built upon in through to patients encountered on the wards, in out-patients clinics or in the community.

#### **Assessment Strategy**

For general assessment strategy see Assessment Strategy section under Knowledge and Understanding.

The following modes/instruments are used to assess ability to apply knowledge, solve problems, critically evaluate evidence and test clinical reasoning:

- Single Best Answer questions (SBA)
- Short Answer case-based (open response) Written assignments
- Oral Presentations
- Multiple Observed Structured Long Examination Records (MOSLER)
- Clinical Encounter Reports (supervisors and members of the clinical team)
- Clinical Logbooks
- E-Portfolio

#### **Practical Skills & Professionalism**

The Practical Skills outcomes for UK medical graduates are stated with the GMC's "outcomes for Graduates" under Outcomes 2: The doctor as a practitioner ([http://www.gmc-uk.org/education/undergraduate/undergrad\\_outcomes\\_2.asp](http://www.gmc-uk.org/education/undergraduate/undergrad_outcomes_2.asp))

The Professionalism outcomes for UK medical graduates are stated with the GMC's "outcomes for Graduates" under Outcomes 3: The doctor as a professional ([http://www.gmc-uk.org/education/undergraduate/undergrad\\_outcomes\\_3.asp](http://www.gmc-uk.org/education/undergraduate/undergrad_outcomes_3.asp))

1. The graduate will be able to carry out a consultation with a patient:
  - a. Take and record a patient's medical history, including family and social history, talking to relatives or other carers where appropriate.
  - b. Elicit patients' questions, their understanding of their condition and treatment options, and their views, concerns, values and preferences.
  - c. Perform a full physical examination.
  - d. Perform a mental-state examination.

- e. 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).
  - f. Determine the extent to which patients want to be involved in decision-making about their care and treatment.
  - g. Provide explanation, advice, reassurance and support.
2. Diagnose and manage clinical presentations.
- a. Interpret findings from the history, physical examination and mental-state examination, appreciating the importance of clinical, psychological, spiritual, religious, social and cultural factors.
  - b. 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.
  - c. Formulate a plan of investigation in partnership with the patient, obtaining informed consent as an essential part of this process.
  - d. Interpret the results of investigations, including growth charts, x-rays and the results of the [diagnostic procedures](#) in Appendix 1.
  - e. Synthesise a full assessment of the patient's problems and define the likely diagnosis or diagnoses.
  - f. 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.
  - g. 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.
  - h. Support patients in caring for themselves.
  - 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.
  - j. 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.
3. Communicate effectively with patients and colleagues in a medical context.
- a. 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.
  - b. 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.
  - c. 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.
  - d. Communicate appropriately in difficult circumstances, such as breaking bad news, and when discussing sensitive issues, such as alcohol consumption, smoking or obesity.
  - e. Communicate appropriately with difficult or violent patients.
  - f. Communicate appropriately with people with mental illness.
  - g. Communicate appropriately with vulnerable patients.
  - h. Communicate effectively in various roles, for example as patient advocate, teacher, manager or improvement leader.
4. Provide immediate care in medical emergencies.
- a. Assess and recognise the severity of a clinical presentation and a need for immediate emergency care.
  - b. Diagnose and manage acute medical emergencies.

- c. Provide basic first aid.
  - d. Provide immediate life support.
  - e. Provide cardio-pulmonary resuscitation or direct other team members to carry out resuscitation.
5. Prescribe drugs safely, effectively and economically.
    - a. Establish an accurate drug history, covering both prescribed and other medication.
    - b. Plan appropriate drug therapy for common indications, including pain and distress.
    - c. Provide a safe and legal prescription.
    - d. Calculate appropriate drug doses and record the outcome accurately.
    - e. Provide patients with appropriate information about their medicines.
    - f. Access reliable information about medicines.
    - g. Detect and report adverse drug reactions.
    - h. 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.
  6. Carry out practical procedures safely and effectively.
    - a. Be able to perform a range of [diagnostic procedures](#), as listed in below (8. List of practical procedures for graduates) and measure and record the findings.
    - b. Be able to perform a range of [therapeutic procedures](#), as listed in below (8. List of practical procedures for graduates).
    - c. Be able to demonstrate correct practice in [general aspects of practical procedures](#), as listed in below (8. List of practical procedures for graduates).
  7. Use information effectively in a medical context.
    - a. Keep accurate, legible and complete clinical records.
    - b. Make effective use of computers and other information systems, including storing and retrieving information.
    - c. Keep to the requirements of confidentiality and data protection legislation and codes of practice in all dealings with information.
    - d. Access information sources and use the information in relation to patient care, health promotion, advice and information to patients, and research and education.
    - e. Apply the principles, method and knowledge of health informatics to medical practice.
  8. List of practical procedures for graduates
    1. Measuring body temperature
    2. Measuring pulse rate and blood pressure
    3. Transcutaneous monitoring of oxygen saturation
    4. Venepuncture
    5. Managing blood samples correctly
    6. Taking blood cultures
    7. Measuring blood glucose
    8. Managing an electrocardiograph (ECG) monitor
    9. Performing and interpreting a 12-lead electrocardiograph
    10. Basic respiratory function tests
    11. Urine multi dipstick test
    12. Advising patients on how to collect a mid-stream urine specimen
    13. Taking nose, throat and skin swabs
    14. Nutritional assessment
    15. Pregnancy testing
    16. Administering oxygen
    17. Establishing peripheral intravenous access and setting up an infusion; use of infusion devices
    18. Making up drugs for parenteral administration
    19. Dosage and administration of insulin and use of sliding scales



20. Subcutaneous and intramuscular injections
  21. Blood transfusion
  22. Male and female urinary catheterisation
  23. Instructing patients in the use of devices for inhaled medication
  24. Use of local anaesthetics
  25. Skin suturing
  26. Wound care and basic wound dressing
  27. Correct techniques for 'moving and handling', including patients
  28. Giving information about the procedure, obtaining and recording consent, and ensuring appropriate aftercare
  29. Hand washing (including surgical 'scrubbing up')
  30. Use of personal protective equipment (gloves, gowns, masks)
  31. Infection control in relation to procedures
  32. Safe disposal of clinical waste, needles and other 'sharps'
9. The graduate will be able to behave according to ethical and legal principles. The graduate will be able to:
- a. 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.
  - b. 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.
  - c. Be polite, considerate, trustworthy and honest, act with integrity, maintain confidentiality, respect patients' dignity and privacy, and understand the importance of appropriate consent.
  - d. 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.
  - e. Recognise the rights and the equal value of all people and how opportunities for some people may be restricted by others' perceptions.
  - f. 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.
  - g. 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.
10. Reflect, learn and teach others.
- a. Acquire, assess, apply and integrate new knowledge, learn to adapt to changing circumstances and ensure that patients receive the highest level of professional care.
  - b. Establish the foundations for lifelong learning and continuing professional development, including a professional development portfolio containing reflections, achievements and learning needs.
  - c. 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.
  - d. Manage time and prioritise tasks and work autonomously when necessary and appropriate.
  - e. Recognise own personal and professional limits and seek help from colleagues and supervisors when necessary.
  - f. 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.

11. Learn and work effectively within a multi-professional team.
  - a. 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.
  - b. Understand the contribution that effective interdisciplinary teamwork makes to the delivery of safe and high-quality care.
  - c. 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.
  - d. 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.
  
12. Protect patients and improve care.
  - a. Place patients' needs and safety at the centre of the care process.
  - b. Deal effectively with uncertainty and change.
  - c. 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.
  - d. 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 quality.
  - e. 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.
  - f. Respond constructively to the outcomes of appraisals, performance reviews and assessments.
  - g. Demonstrate awareness of the role of doctors as managers, including seeking ways to continually improve the use and prioritisation of resources.
  - h. 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.
  - 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.
  - j. Recognise the duty to take action if a colleague's health, performance or conduct is putting patients at risk.

#### **Teaching and Learning Methods**

The following teaching and learning methods are used to enable the student to achieve outcomes relating to the practical skills expectations of a medical graduate:

- Clinical skills training: initially in the supportive environment (e.g., the Clinical Skills Laboratory) and subsequently in small groups during clinical attachments.
- Small group tutorials and seminars: provide opportunities for interaction, discussion and clarification in support of learning in selected areas.
- Small-group clinical teaching: particularly for experiential learning in hospital and community care settings.
- Case presentations/discussions: opportunities to present and discuss cases in small groups to develop initially history and examination skills and subsequently to increase competency in investigation, diagnosis and management.
- Practical learning exercises: provide opportunities to work through problems/practical exercises in groups and individually.
- Project work: involving working as a team, defining and solving problems
- Supervised training sessions: to develop information skills and proficiency in the use of communications.
- Video/role play/consultation skills training: to teach communication skills.

The following teaching and learning methods are used to enable the student to achieve outcomes relating to the professionalism expectations of a medical graduate:

- Video and role play: to teach communication skills and develop attitudes and promote reflective practice.
- Small group activities: to encourage teamwork and involvement.
- Written assignments, project work and Student-Selected Components: to provide acquisition of many opportunities for self-expression and choice, and serve to foster the attitudinal objectives

Clinical attachments from the early visits to hospitals and general practices in Year 1 and 2 through to the clinical placements in Years 3-5: to provide the opportunity for integration, consolidation and application of the knowledge, skills and attitudes accumulated from all the other course components and as such provide teaching and learning experiences which enable students to achieve learning outcomes in all three domains.

### **Assessment Strategy**

For general assessment strategy see Assessment Strategy section under Knowledge and Understanding.

The following modes/instruments are used to assess practical skills and professionalism within the programme.

- Short Answer case-based (written skills)
- Project reports and written assignments
- Multi-station Objective Structured Clinical Examinations (OSCE)
- Multiple Observed Structured Long Examination Records (MOSLER)
- Clinical Logbooks
- E-Portfolio
- Workplace based assessment of practical clinical skills (clinical encounters)
- Oral Presentations
- Monitoring of professional attitudes and behaviours

### **Transferable/Key Skills**

On completing the programme students should be able to:

1. In accessing and manipulating data, demonstrate ability to use:
  - library and other information systems to access data
  - information from primary sources to inform evidence-based practice
  - use information from secondary sources (e.g., professional guidelines)
2. Demonstrate C&IT skills, including use of:
  - E-mail
  - word-processing
  - on-line databases
  - spreadsheets & statistical packages
  - search engines and decision support tools
3. Maintain records for personal & professional development
4. Conduct oneself as a reflective and accountable practitioner
5. Manage one's own learning
6. Manage one's own self-care, by:
  - recognising the pressures of a demanding professional life on oneself and others and the need to maintain a balance between professional and personal activities
  - attending to one's own lifestyle and recognising the hazards of self-medication and substance abuse
  - making use of available help and advice in stressful circumstances
6. Identify the value of career planning and be able to set realistic short and long-term goals

8. Accept a commitment to medicine through adherence to the codes of conduct and behaviour expected of a member of the profession
9. Recognise key personal motivating factors and their importance in sustaining a high level of commitment
10. Participate fully in the life of the professional community
11. Demonstrate an understanding of the practice of medicine in a diverse, multicultural society, by:
  - valuing diversity
  - showing respect for differing personalities, lifestyles and cultures, in patients and colleagues and in health and illness
12. Demonstrate the ability to cope with uncertainty, by:
  - appreciating that uncertainty exists and using cognitive and intellectual strategies when dealing with uncertainty
 making decisions in partnership with colleagues and patients, recognising one's own level of responsibility and capability

### **Teaching and Learning Methods**

The following teaching and learning methods are used to enable students to achieve outcomes relating to data & information handling skills:

- Practical classes and small group seminars/tutorials: to develop data handling and interpretative skills
- Supervised training sessions: to develop information skills and proficiency in the use of information technology (C&IT);
- Project work: working in small groups to collectively solve problems

### **Assessment Strategy**

For general assessment strategy see Assessment Strategy section under Knowledge and Understanding.

The following modes/instruments are used to assess transferable/key skills within the programme.

- Short Answer case-based (open response)
- Project reports and written assignments
- Multi-station Objective Structured Clinical Examinations (OSCE)
- Multiple Observed Structured Long Examination Records (MOSLER)
- Clinical Encounter Reports
- Participation in Evaluation/Audit/Appraisal activities
- Compliance with Learning Agreement
- E-Portfolio
- Clinical Logbooks
- Monitoring of behaviours and attitudes, including attendance and behaviour; including compliance with the MBBS learning agreement

## **12 Programme Curriculum, Structure and Features**

### **Basic structure of the programme**

The curriculum is designed to provide students with a general medical education, suitable for all types of doctor entering the Foundation Programme and subsequent specialist training. The content of the programme is organised to provide a core course, encompassing the basic knowledge, understanding, personal attributes and skills needed at the start of the Foundation Programme, and Student-Selected Components which augments the core and allows students to study topics of their own choosing.

Each Year of the course has an overarching theme:

- Year 1 & 2 "Essentials of Medical Practice"

- Year 3 “Clinically Based Practice”
- Year 4 “Complexity in Medical Practice: Continuity, Co-morbidity and Context”
- Year 5 “Transition to Medical Practitioner”

The first two years of the programme, first year of the A101 programme, focuses on normal and abnormal structure and function, development of clinical and communications skills and professionalism as well as a core understanding of health behaviour and interventions, ethics and social science. This is supported and supplemented by early clinical experience in hospital and community settings. Years 3, 4 and 5 focus on clinical practice through a series of themed clinical placements building on the foundations laid in the first 2 years of the course. Clinical cases provide the context and unit of study structure for the first two years of the course. A number of these case are revised throughout Years 3-5 to aid development with added clinical complexity built in recognition of the students’ development as they progress through the curriculum.

In relation to the core MBBS programme, a fully integrated approach is adopted from the outset. The clinical cases form the unit of study in Year 1 and 2 and placements form the unit of study in Years 3, 4 and 5. Study guides are provided for each unit of study outlining the expected learning outcomes for that unit. In order to emphasise integration and build interrelationships between the disciplines, each case/placement is delivered by an interdisciplinary teaching team. All teaching is based around a series of core cases which allow learning about basic clinical sciences to be contextualised in a clinical scenario.

The structure of Year 1 is as follows:

- **Foundation:** 3-week block of study focusing on basic cell biology, genetics, metabolism, infectious disease as well as introductions to professionalism, clinical and communication skills ethics.
- **13 clinical cases:** Content includes, clinical skills, communication, professionalism, Public Health, mental health and ill health, health psychology, respiratory, renal, cardiovascular, hepatic, gastrointestinal, blood, metabolism, allergy, immune, inflammation, cancer, genetics and infectious disease.

The structure of Year 2 is as follows:

- **12 clinical cases:** Content includes, reproduction, neuro, musculoskeletal, nutrition, mental ill health, ageing, immune, infectious disease, dementia, clinical skills, communication, professionalism and Public Health.
- **Transition to Clinically Based Practice:** 3-week block at the end of year 2 focusing on preparing students for learning in the clinical environment including orientation, applying clinical and communication skills developed in Years 1 and 2 to patients with signs.

In Years 3, 4 and 5, students are distributed throughout the regional medical school to gain further clinical experience and build upon the core knowledge, skills and professionalism acquired in Years 1 and 2.

The structure of Year 3 is as follows with placements delivered in hospital and community settings:

- **Essentials of Clinical Practice**
- **Medicine, Acute Care and Surgery**
- **Integrated Medical Placement 1: Reproductive Health**
- **Integrated Medical Placement 2: Mental Health**
- **Integrated Medical Placement 3: Child and Young Persons’ Health**
- **Student Selected Component (1)**

The structure of Year 4 is as follows with placements delivered in hospital and community settings:

- **Clinical Decision Making**
- **Advanced Clinical Experience -ACE a Longitudinal Integrated Clerkship**
- **Student Selected Component (2)**

- **Medical Elective:** An opportunity for medical student to undertake experience in a health care area of their choice in a setting of their choice worldwide.

The structure of Year 5 is as follows with placements delivered in hospital and community settings:

- **Assistantship: Child and Young Persons' Health**
- **Assistantship: Reproductive Health**
- **Assistantship: Mental Health**
- **Assistantship: General Practice 1**
- **Good Medical Practice**
- **Acute and Critical Care**
- **Assistantship: Medicine**
- **Assistantship: Surgery**
- **Assistantship: General Practice 2**

Following successful completion of the MBBS programme, graduates undertake a 2-week preparatory course to ease the transition from final year student to Foundation Programme Doctor. This course allows graduates to 'shadow' the F1 doctor whom they will be relieving.

#### **Key features of the programme (including what makes the programme distinctive)**

##### **Faculty of Medical Science and the School of Medical Education**

The MBBS programme sits within the School of Medical Education and is supported by the Faculty of Medical Sciences Learning Technology Support Unit through the development and maintenance various platforms including the student feedback website, electronic student record system, the virtual learning environment, student course evaluation. The virtual learning environment is bespoke and tailored to supporting medical student learning through provision of timetables, course information and form as well as teaching resources and links to external materials around the regional medical school. The student record system allows details of student progress, absences and meetings with tutors and curriculum officers to be shared with staff supporting student progression when based away from the University.

##### **Regional basis**

The delivery of the MBBS curriculum depends on a partnership between the Newcastle University, and the NHS and the Malaysian Medical Council (MMC for NUMed delivery). In order to provide sufficient clinical placements for the numbers of students we currently have on the course we need to use teaching hospitals across the whole of the Northern region of England and those authorised by the MMC for NUMed. One of the strengths of the course has been the ability to deliver an equivalent student experience across a geographically dispersed region. This has in large been due to the management structures that have been put in place with each local Trust and other health care providers led by a Local Education Provider (LEP) Lead. The LEP Leads meet regularly during term and ensure coordination of the student experience across the region.

##### **Supporting future medical careers**

The design of the programme ensures that students have increased clinical exposure across all five years. The balance of time spent in core clinical areas, within specialties and within primary and community settings ensures a breadth of experience for students and provides an insight into future careers. Dedicated time spent within 'under-recruited' areas such as Primary Care and Psychiatry helps to support the future needs of the healthcare workforce.

##### **Intercalation opportunities**

The fundamental aim of basic medical education is to produce graduates who have a sound and broadly based knowledge of the principles and practice of medicine. Opportunities for gaining research experience are necessarily limited in the mainstream programme. However, it is essential for the future scientific and clinical development of the profession that it can draw on a pool of clinically qualified graduates also trained in research.

It is the practice of this Medical School to encourage some highly motivated and able medical students to step aside from their mainstream undergraduate studies to intercalate one year of additional study. Opportunities for intercalation exist following successful completion of Year 2 or Year 4 at the first attempt.

Following Year 2, a student is able to intercalate the final year of one of the science honours degrees offered by the School of Biomedical Sciences in the Faculty of Medical Sciences.

Following Year 4 a student is able to intercalate a programme from the postgraduate taught or research programmes available in the Faculty or an equivalent programme offered at another institution subject to approval from the Degree Programme Director.

Students who have undertaken a period of intercalation may be offered the opportunity to study a PhD. Where this is the case, the student should seek permission from the Degree Programme Director for an extended leave of absence from the MBBS programme. Permission will also be dependent on the student academic record. Due to the extended period of leave from the course a student undertaking a PhD will be required to undertake at least one year of formative study and reskilling prior to commencing final year. The PhD thesis must be submitted prior to resuming the MBBS course.

**Programme regulations (link to on-line version)**

[-RA100, A101, 1500U\\_vFinal.pdf](#)

**13 Support for Student Learning**

Generic information regarding University provision is available at the following link.

[qsh\\_progspec\\_generic\\_info.pdf](#)

**14 Methods for evaluating and improving the quality and standards of teaching and learning**

Generic information regarding University provision is available at the following link.

[qsh\\_progspec\\_generic\\_info.pdf](#)

**15 Regulation of assessment**

Generic information regarding University provision is available at the following link.

[qsh\\_progspec\\_generic\\_info.pdf](#)

In addition, information relating to the programme is provided in:

The University Prospectus: <http://www.ncl.ac.uk/undergraduate/degrees/#subject>

Degree Programme and University Regulations: <http://www.ncl.ac.uk/regulations/docs/>

Please note. This specification provides a concise summary of the main features of the programme and of the learning outcomes that a typical student might reasonably be expected to achieve if she/he takes full advantage of the learning opportunities provided.