UCL MEDICAL SCHOOL

MBBS Clinical and Professional Practice Student Guide 2016-2017

Clinical and Professional Practice

CONTENTS

The aims of Clinical and Professional Practice

The overall aims are to enable you to:

- understand medicine as an integrated whole
- understand how theory and understanding of health and disease link to practice
- make evidenced-based clinical decisions that promote person-centred practice in a rapidly evolving healthcare system
- integrate knowledge of biomedical and human sciences to enhance your interpretation of the patient's own narrative, physical signs and social data
- develop and demonstrate your professionalism through commitment to the duties of a doctor, an understanding of patient safety and the application of ethical and legal principles.

There are 16 modules within Clinical and Professional Practice and each module has its own aims and objectives.

Section 2: The Individual Clinical and Professional Practice Modules

This section contains the following information and guidance for students:

- A brief description of each of the 16 Clinical and Professional Practice modules
- The key aims and activities of each of the Clinical and Professional Practice modules

Integrated Clinical and Professional Practice

Anatomy and Imaging

Aims

The aims of *Anatomy and Imaging* are to:

- ensure students acquire a sound working knowledge of normal human structure and function
- ensure students become fluent at reading and interpreting normal and abnormal human structure and function via a broad range of modern medical imaging techniques
- provide a seamless programme of integrated teaching that shifts over the years from core human structure and function towards anatomy and imaging being part of the integrated basis of clinical diagnosis and treatment.

Overview of teaching

Anatomy and imaging teaching is delivered over each of the six years of the course. In the first and second years, anatomy is an integrated core component of the horizontal modules and imaging and clinically illustrative material are key learning adjuncts. In year 4 the emphasis switches to case-based teaching sessions where imaging and applied anatomy are now taught in a clinical context through a series of module specific clinical vignettes. In years 5 and 6 teaching is fully integrated with placements based teaching delivered by the NHS Trust radiologists and core teaching weeks. Aspects of this module will be incorporated into assessments throughout the programme.

Year 1: Anatomical language and the grand plan of the major systems. The anatomy of the thorax, abdomen and pelvis, including the principles of routine medical imaging techniques.

Year 2: The functional anatomy of the musculoskeletal system and associated clinical

imaging. Further anatomy of the pelvis with emphasis on the reproductive system. Basic clinical anatomy of the head and neck including neuroanatomy, neuroscience and imaging of the head, neck and brain.

Year 3: Intercalated BSc year. Certain IBSc programmes provide an opportunity to study aspects of anatomy at an advanced level.

Year 4: Case-based anatomy and imaging sessions are timetabled early in each clinical module. Module A prepares students for the essential imaging and anatomy they will use in cardiology, respiratory and acute medicine. Module B focuses on gastroenterology, orthopaedics and general surgery whilst Module C puts the emphasis on clinical cases that illustrate how anatomy and imaging are central to endocrine disorders, neurology and infectious diseases.

Year 5 and 6: Included in placements based radiology and surgical teaching, teaching in the core teaching and Anchor weeks and in elements of *Case of the Month* and Moodle revision resources.

Clinical Skills and Practical Procedures

Aims

The aims of Clinical Skills and Practical Procedures are to:

- ensure all of our students are competent and confident to perform the skills and procedures listed in *Outcomes for Graduates* 2016
- introduce these skills and procedures at an appropriate point in the programme and to increase these skills every year
- ensure that the student has the skills to be a valuable team member as early as possible in their clinical placements

Overview of teaching:

Clinical skills and practical procedures are key elements of the MBBS programme and proven competence in a wide range of skills is part of achieving the '*Doctor as Practitioner*' outcomes specified in *Outcomes for Graduates* 2016. The GMC has produced a list of the skills that it expects all graduates to be able to prove they have mastered on graduation: (http://www.gmc-uk.org/education/undergraduate/undergrad_outcomes_2.asp)

The Clinical Skills and Practical Procedures module ensures that students are taught how to perform many of these skills but relies on the 'horizontal' modules to teach the rest and reinforce the learning by building on the foundations provided by this module's teaching. The successful completion of the required competencies are recorded on the *Record of Completed Procedures* card; these cards should be uploaded into your e-portfolio as they will provide evidence for your Foundation School of the completion of these skills. Aspects of this module will be incorporated in assessments throughout the programme. Over the six years of the course, the teaching delivered under the umbrella of clinical skills and practical procedures includes:

Year 1: infection control measures including: hand washing using the seven stage technique; pulse, BP and temperature measurement; basic cardiovascular, respiratory and abdominal examination; PEFR recording, urinalysis; and first aid, including CPR.

Year 2: basic motor and sensory neurological examination, Gait Arms Legs Spine Assessment (GALS).

Year 4: clinical examinations including cardiovascular, respiratory, abdominal, cranial nerve, neurological examination of upper and lower limbs, examination of the eyes and musculoskeletal system examination. Practical skills and procedures including venepuncture, cannulation, arterial blood gas sampling, manual handling, basic suturing techniques, intravenous / subcutaneous / intramuscular injection, basic airway management, bladder catheterisation, insertion of nasogastric tube, basic and advanced life support, the immediate assessment and treatment of the critically ill patient and safe and legal prescribing.

Year 5: In Module A procedures include: measuring occipito-frontal head circumference; testing urine using dipstick; plotting weight, height and OFC on growth chart; changing and feeding a baby; measure peak expiratory flow rate, blood pressure; administer inhaled medication; advise/administer/use adrenaline auto-injector. In Module B procedures include: antenatal examination; female genital examination; Cusco speculum examination; support to women in labour; breast examination; male genital examination; sexual history taking and HIV pretest discussion. In Module C procedures include: full psychiatric mental state examination; visual acuity and field testing; fundoscopy; otoscopy; health of the older person case; cancer case; psychiatry case; breaking bad news case.

Year 6: In DGH procedures include: taking a blood culture; performing an arterial blood gas sample; performing and interpreting a 12 lead electrocardiograph; inserting an iv cannula & writing up an infusion; performing a catheterisation; performing suturing / applying dressings or steristrips; taking a full set of clinical observations and plotting them on a chart; demonstrating competency in performing life support on a manikin*; w*riting safe prescriptions; completing an inpatient drug chart; writing a discharge notification with TTAs; completing a death certificate; and setting up oxygen.

Pathological Sciences

Aims

The aims of *Pathological Sciences* are to:

- ensure students acquire a sound understanding of the theoretical basis of the pathological sciences
- ensure students become proficient in the application of the principles of pathological sciences to the investigation of disease and its management
- provide a seamless programme of integrated teaching that shifts over the years from basic scientific principles to part of the integrated basis of clinical diagnosis and treatment.

Overview of teaching

Over the six years of the course, the teaching that is delivered under the umbrella of Pathological Sciences includes: clinical biochemistry, haematology, immunology, microbiology (including virology) and pathology (histopathology).Teaching is through sessions woven into the fabric of the horizontal modules and via additional lectures, tutorials and practical sessions in Clinical and Professional Practice Modules and in the introductory and core module teaching time in years 4 and 5. Case-based teaching sessions are introduced in year 1 and increasingly utilised as students progress through the course. Aspects of this module are incorporated into assessments throughout the programme.

Year 1: an introduction to pathological sciences as a whole; principles of haematology, microbiology and immunology.

Year 2: Principles of the pathology of bones & joints, endocrine disease, disease of the foetus and cancer, neuropathology.

Year 3: Intercalated BSc year. Certain programmes provide opportunities to study aspects of pathological sciences at an advanced level e.g. those provided by the Division of Infection & Immunity.

Year 4: Teaching relevant to each clinical module both within the core introductory weeks and embedded within the module. This is accompanied by a pathological sciences workbook.

Year 5: Teaching relevant to each clinical module both within the core introductory weeks and embedded within the module.

Year 6: Included in elements of *Case of the Month,* Moodle revision resources and anchor days.

Use of Evidence

Aims

The overall aim of *Use of Evidence* is to enable students to make use of research evidence in their learning and practice by helping them develop the understanding and skills necessary for *finding the evidence*, *evaluating it*, and *using it* in decision making, research and clinical practice. This includes teaching them to understand the *role* of evidence in the practice of medicine and to critically appraise the *results* of relevant clinical trials, epidemiological studies, and other quantitative research studies, as reported in the medical and scientific literature. Detailed aims include helping students to:

- understand the role of evidence in the practice of medicine
- develop the skills to search for the evidence relating to a particular clinical question
- understand the methodology used in biomedical research and appreciate the strengths and weakness of different research designs, including being able to:
    - understand important methodological features and their rationale in the design, conduct and analysis of randomised controlled trials (RCTs); define, interpret and calculate statistical measures relevant to the interpretation of their results; and undertake a standard appraisal of a scientific paper, presenting the conduct and results of an RCT
    - understand the difference between observational and intervention studies, and appreciate their relative uses, strengths and weaknesses, and contributions to research evidence
    - understand the aims, methodological features, and strengths and weaknesses of commonly used observational epidemiological study designs (e.g. cross-sectional, case-control and cohort studies) and interpret simple statistical measures used in the analyses of such studies
- gain the skills required to critically appraise and interpret the results of studies from the medical and scientific literature, including:
    - achieving an understanding of fundamental statistical concepts and techniques relevant to the analysis, understanding and interpretation of medical research data

    - appreciating how the accuracy of diagnostic tests can be evaluated and summarised; developing the skills to calculate and interpret statistical measures relating to the evaluation of the accuracy of diagnostic tests; and applying knowledge of the accuracy of a diagnostic test to a particular patient's probability of having a given condition
    - understanding how to calculate and interpret statistical measures relating to the assessment of growth using standard growth charts
    - developing an understanding of the fundamental properties required for accurate clinical measuring instruments; and understanding and interpreting the ways in which these are evaluated and assessed
- acquire the skills to utilise and apply evidence in a critical manner to help inform clinical decision making, including:
    - developing the skills to identify, explain and communicate to audiences with varying levels of expertise the results of a complex RCT
    - understanding, assessing the conduct of, and interpreting the results of a systematic review which brings together evidence relating to a particular clinical question
    - developing the knowledge and skills to interpret the results of a systematic review; and applying the results to clinical decision making, taking into account the patients' own values and preferences.

Overview of teaching

Over the six years of the course, the teaching delivered under the umbrella of *Use of Evidence* involves two main themes: *finding and using evidence* and *understanding research evidence*. This includes searching for evidence, referencing evidence appropriately, understanding the types of evidence available (including the types of research design as well as resources such as NICE Evidence, systematic review databases etc.) the evaluation of evidence and use of statistics; using evidence to support clinical decision making, academic writing and one's own research. It includes sessions woven into the fabric of the 'horizontal' modules, particularly in Years 1 and 2, and additional sessions in Clinical and Professional Practice time, mainly in Years 1, 2 and 4.

Year 1: *Finding and using evidence:* range of resources and sources, utilising databases, introducing NICE Evidence, referencing and avoiding plagiarism, how to use an article about a diagnostic test, finding and appraising reports of randomised controlled trials.
Understanding research evidence: basic statistical concepts relevant to medicine, evaluation of the accuracy of diagnostic tests, epidemiological measures of disease morbidity and mortality, types of epidemiological study design, randomised controlled trials, their methodology and the interpretation of their results, basic statistical techniques used in the analysis of randomised controlled trials, methodology and interpretation of cohort studies and case-control studies.

Year 2: *Finding and using evidence:* developing key skills in searching for evidence concerning the effectiveness of specific health care interventions.
Understanding research evidence: growth charts and the calculation and interpretation of the relevant measures used in their interpretation, assessment of the accuracy of measuring instruments, communicating the results of complex RCTs, systematic reviews of randomised controlled trials; their methodology and critical appraisal, interpretation and application of the results of systematic reviews as presented in Forest plots, concept of causation in epidemiological studies.

Year 3: *Finding and using evidence:* developing key skills in searching for evidence and using evidence in answering research or clinical questions.

Year 4: Use of evidence in establishing prognosis in clinical medicine; use of evidence in clinical decisions; revision of epidemiological concepts and research designs: the example of antioxidants in cardiovascular disease; *Finding and using evidence*: accessing evidence that matters (i.e. that is patient-oriented); finding and using sources of patient information.

Year 5: *Finding and using evidence*: developing key skills in searching for evidence for Year 5 group projects; a taster on finding quality information for quality practice.

Year 6: Revision sessions and inclusion in *Case of the Month.*

Assessment: Assessment of this module is through a combination of written and OSCE or OCAPE examinations.

Use of Medicines

Aims

The overall aim of teaching therapeutics is to produce doctors who know how to use the right drug, at the right dose and duration, for the right patient, at the right price.

The specific aims of *Use of Medicines* are to enable students to:

- acquire in years 1 & 2, the knowledge and understanding of the basic principles and language of drug action
- apply this understanding, in the clinical setting of years 4-6, in order to develop a rational therapeutic approach for drug treatment of common medical conditions
- acquire a core knowledge of mechanisms of drug action of major drug classes, and understand expected therapeutic and harmful effects and the differences between symptom relief and benefits on long term outcomes
- develop an understanding of the complexities of using multiple drugs in patients with multiple pathologies.
- apply pharmacology and therapeutics knowledge to prescribe drugs rationally and safely
- develop skills for evaluation new medicines as they emerge.

Aspects of this module will be incorporated into assessments throughout the programme.

Overview of teaching

Year 1: basic pharmacology linked to the horizontal modules, consisting of five lectures and one problem-based learning exercise

Year 2: basic pharmacology lecture series (45 lectures), six practical classes and five tutorials

Year 3: a range of BSc units are offered including Drug Development, Molecular Pharmacology, Receptor Mechanisms, Synaptic Pharmacology, Psychopharmacology, Neuropharmacology & Immunopharmacology.

Year 4: an orientation lecture in the Introduction and Orientation Module is followed by a series of streamed lectures covering the core content of Use of Medicines. These can be viewed and reviewed at any time and during all clinical years to help with ongoing learning. Tutorials which will be organised through the year will complement these lectures, going into

details where lectures might not allow and tacking more complicated topics. Nine therapeutics and prescribing sessions in Module A begins to prepare you for applied therapeutics

Year 5: practical therapeutics in Maternal Medicine and Care of the Older Person delivered as small group teaching

Year 6: Integrated sessions with Anchor days.

Assessment: Assessment of this module is through a combination of written and OSCE or OCAPE examinations.

Overarching Themes

Clinical Communication, e-Health, Ethics and Law and Professionalism

Aims

These modules aim to equip students to:

- understand the contemporary thinking and frameworks about what constitutes professionalism and professional practice
- develop core skills and an orientation for effective communication, ethical practice, and working within the framework of the law and professional guidance
- understand the roles of the doctor in the healthcare system, including clinical leadership, patient advocacy and ensuring good quality care
- understand the role of e-Health in the management of patients and populations
- recognise workplace based teaching around real patient encounters as a process of integrative thinking
- keep accurate, useful clinical records
- access and use information sources to perform their job as a junior doctor and beyond
- understand how e-Health transforms data into knowledge and facilitates organisational change.

Overview of teaching

These modules underpin principles or ways of thinking in medicine. They include a wide range of activities and learning domains: the duties of a doctor, personal development, clinical communication, ethics and law, e-Health, leadership, advocacy, patient safety and quality of care, team-working and inter-professional practice.

They describe teaching that encourages integrative thinking and includes making sense of learning about the science of disease, the science of disease management, diagnostics, clinical reasoning alongside learning in all other domains to create a deep understanding of health and disease.

Over the six years of the programme the teaching includes a small number of plenary sessions within the ‘horizontal’ modules and a significant number of peel off sessions, often in small groups with a facilitator, self-directed learning activities and the *Case of the Month:* a virtual learning environment activity. Aspects of these modules will be incorporated into assessments throughout the programme.

Year 1:

- *Clinical Communication*: the clinical consultation, the impact of clinical communication, interviewing patients in hospital and community-based settings.
- *e-Health*: introduction to e-Health.
- *Ethics and Law*: ethics and law in medicine; personal and professional values; duty of care; confidentiality; consent.
- *Professionalism*: what professionalism is; learning and working in groups; being a medical student; personal development; making sense of learning in year 1; foundation doctor shadowing.

Year 2:

- *Clinical Communication*: core topics: empathy and person-centredness, discussing risk and uncertainty, communicating when there are barriers (speech and language impairment, sensory impairment, English as a second language).
- *e-Health*: confidentiality and data protection issues.
- *Ethics and Law*: assisted dying; abortion; humanitarian ethics.
- *Professionalism*: good medical practice; person-centredness; giving and receiving feedback; shame; self-care (including resilience; drugs and alcohol; the patient and complementary therapies; error, safety, and multisource feedback (peer feedback on the student's performance and contribution to small group work).

Year 3:

- *e-Health*: confidentiality and data protection issues.
- *Ethics and Law*: ethical research.
- *Professionalism*: academic writing and writing for publication

Year 4:

- *Clinical Communication*: the structure of the clinical consultation (Calgary-Cambridge guide), conducting an effective consultation as a medical student, staying within professional boundaries, adapting one's consultation style, gathering information, explanation and planning, breaking bad news, basic skills in inter-professional communication, structured handover.
- *e-Health*: recording consultations.
- *Ethics and Law*: from theory to practice; capacity; raising and responding to concerns; withholding and withdrawing treatment, DNACPR decisions.
- *Professionalism*: professional practice and the NHS.

Year 5:

- *Clinical Communication*: conducting effective consultations in specific contexts, consultations with patients, relatives and families, gathering information, explanation and planning, breaking bad news, responding to difficult situations.
- *e-Health*: making clinical decisions.
- *Ethics and Law*: integrating ethics and law with clinical practice: women's sexual and reproductive health (abortion, FGM, gender-based violence); children and young people; end of life.

Year 6:

- *Clinical Communication*: applying the principles of effective communication with patients, relatives and colleagues to the role of the Foundation doctor.
- *Ethics and Law*: Case of the month - dealing with ethically challenging situations faced by Foundation Year doctors; pre-finals revision lecture.
- *Professionalism*: Case of the Month.

Mental Health

Aims

The aims of *Mental Health* are to:

- provide students with an understanding of the frequency, nature, range and associated morbidity of mental health problems across the life course
- provide students with knowledge and understanding of both common and severe and enduring mental illness, the principles underlying modern psychiatric theory and commonly used treatments in all age groups and across clinical contexts (primary care and community care and, secondary care and inpatient care)
- enable students to understand the complex relationships between physical and mental health
- assist students in developing the necessary skills to apply this knowledge in clinical situations
- facilitate an understanding of public attitudes towards those with mental health problems and ways of changing unhelpful attitudes.
- encourage students to develop the appropriate attitudes necessary to respond empathically to mental illness and psychological distress in medical and broader settings.

Overview of teaching

Mental Health is an overarching theme of the programme designed to enable UCL graduates to have a better understanding of mental health and be more able to help those with mental health needs, regardless of which specialty they ultimately pursue. It is addressed in *all* years and in all modules, including plenaries, tutorials, small group work, a number of attachments including child and adolescent mental health, liaison and community based mental health, adult mental health and mental health services for older persons. Over the six years of the course the teaching includes a significant number of sessions woven into the fabric of the 'horizontal' modules, placements and additional sessions in Clinical and Professional Practice. Aspects of this theme will be incorporated into assessments throughout the programme.

Teaching under the umbrella of Mental Health across the programme includes:

Year 1: an overview lecture: *It's all in the mind,* one small group work session and a number of psychology lectures.

Year 2: further psychology lectures delivered by the Mental Health team, plus lectures delivered by the Use of Medicines team which explore the links between drugs and mental illness.

Year 4: Year 4 provides students with an introduction to clinical psychiatry with an emphasis on mental health in a medical setting (primary and secondary care). *Module A*: liaison psychiatry, is a freestanding week of lectures, tutorials and face to face patient contact and covers; the relationship between physical and mental health, managing behavioural disturbance, common mental disorders, personality disorders, introduction to psychotherapies, drugs and alcohol, self-harm and suicide, ; Clinical and Professional Practice modules focus on Cultural Psychiatry, Patients with intellectual disabilities, an introduction to Psychosis, and an introduction to Mood Disorders.

Year 5: In Year 5, there are plenary lectures and small group sessions covering core topics in psychiatry; these build on teaching in previous years and have an additional focus on management of mental illness. In Module C students are placed for four week in one of the neighbouring mental health Trusts or in the private sector. This year also covers aspects of

mental health and the life course: Perinatal psychiatry, child psychiatry, menstrual psychiatry, men and mental illness, old age psychiatry, palliative care psychiatry.

Year 6: Mental health revision in GP and DGH placements.

Social Determinants of Health (including Electives)

Aims

The Social Determinants of Health (SDoH) module places human health in the wider context. The module aims to ensure students can integrate and apply understanding of the following in their all their academic and clinical work:

- how social, economic, political, cultural, and environmental factors exert powerful effects on health and illness, in communities, populations, and globally
- how these factors influence design, delivery and access to healthcare
- how public health policies, health promotion, economic development and environmental interventions, often have more profound health benefits than biomedical treatments
- how health professionals may act as advocates and change agents to address these wider determinants and reduce health inequalities

Overview of teaching

This module integrates 5 subjects or fields: (i) medical sociology; (ii) global health, health systems and environmental sustainability; (iii) public health, health promotion and health economics; (iv) health equity and social epidemiology; and (v) occupational health. We aim to make these topics immediately relevant and valuable by linking to students' learning and experience over the course and contributing to assessments throughout the programme (see table).

Social Determinants of Health Topics	**Subjects/Field**	**Links/*Assessment***
Year 1: Keys concepts social determinants **Global health:** Globalisation, health and healthcare **Sociology**: effects of social context, processes, and structures on individual and collective experience of health and illness; and on health services and medical practice; **Social epidemiology & Health equity:** "The Health Gap" – socio-economic variations in causation and outcomes of ill health- locally & globally.	**Sociology** **Global health** **Health systems** **Social epidemiology &** **Health equity**	Community placements and community visitors Use of Evidence ***Assessment*** *OSCE & SBAs* *Portfolio submission:* *'Origins & Future of NHS'*
Year 2: **Occupational health :** Relationship between health & work **Global health** Environmental Sustainability	**Occupational health** **Global health**	***Assessment*** *OSCE & SBAs*
Year 3: The SDoH module exposes students to qualitative and qualitative research methods of value to many iBSc students. It encourages thinking about the nature of scientific knowledge from multiple perspectives – beyond basic biomedical approaches.		
Year 4: **Health equity** and taking a social history; integrating understanding of social determinants over the life course	**Health equity**	**Links** All clinical placements

Health economics and screening **Health promotion,** communicable disease prevention & homelessness	**Health economics** **Health promotion & Public health policy**	***Assessment*** *OSCE & SBAs*
Year 5: **Global health** • Global is local healthcare for migrants; health systems and trans-national threats to health • Elective preparation: student case studies (clinico-ethical & socio-cultural dilemmas) **Public health & health promotion** into clinical practice (smoking; childhood obesity; drugs & alcohol) **Occupational health** in clinical practice	**Global health** **Public health & health policy** **Occupational health**	**Links** All clinical placements ***Assessment*** *SBAs & OSCE* *Case of the Month.* *Portfolio submission:* *Country Study*
Year 6: Global health & health systems – academic component of the Elective Inequalities , chronic diseases & the doctors role in health advocacy	**Global health & health systems** **Health Equity**	**Links** All clinical placements ***Assessment*** *SBAs & OSCE* *Portfolio submission:* *Electives Report*

Person-Centred Learning, Student-Centred Learning

The Patient Pathways

Aims

The patient pathways create opportunities for students to understand the experience of illness from the patient perspective, aspects of illness such as the natural history of disease processes and the care pathways that support patients in the management of their illness and also, where possible, to develop longitudinal relationships with patients. There are four formal patient pathways but you will be encouraged to follow individual patients through their treatment in areas such as breast cancer, liaison psychiatry, COPD etc. The patient pathways teaching and learning includes some or all of: plenaries, tutorials, placements, visits to services and patients, and meetings between the student and patients without direct supervision.

Overview of the pathways

- **Cancer** patient pathway takes place in Year 4 and is designed to provide an understanding of the diagnosis and management of cancer patients, exposure to the patients' experience of their cancer journey, and practice in forming relationships with patients. Following an introductory lecture, students are allocated a cancer patient pathway tutor, whom they meet together with fellow students for five tutorials between October and June. They are supported to find a suitable cancer patient themselves and accompany them to some of their appointments and treatment (i.e chemotherapy or radiotherapy sessions) for a period of a few months. At the end of the pathway, they submit an essay on the case history with a personal reflection and a section on an area of special interest of the diagnosis and management of their patient. Their learning is reinforced with tutorials and case discussions on the most common cancers: lung, breast,

prostate and colorectal cancer. Students submitting outstanding essays have the opportunity to be nominated for the Alan Goldsmith prize.

- **Cardiometabolic Illness** patient pathway takes place in Year 2 from January to March on Friday afternoons. It consists of six small group work sessions, four of which involve patients with either cardiovascular or diabetic disease. The sessions are facilitated by doctors who are specialists in cardiometabolic disease. Week by week, the tutors introduce students to skills of history taking and investigative techniques used in diagnosis and they explore the impact of illness of their patients. Students are encouraged to interact and practice their communication skills within this supported environment. Students are assessed by an essay on a chosen area of interest related to a patient they have seen during the module as well as an end of module quiz.

- **Integrated and Community Care** pathway activities take place in Years 1 and 2. Through these, students:
    - gain exposure to patients, carers, health and social care professionals from all walks of life and to a range of health and social care services in the community; they meet patients/clients, professionals and community volunteers in small group work and community visits to discuss their experiences of health/illness and/or of delivering support
    - learn to explore people's personal histories and take account of their social context when considering health support needs
    - consider how diversity, inequalities and discrimination affect people's lives and their access to services
    - participate in disability awareness workshops (Year 2).

- **Person-Centred Care** patient pathway takes place in Year 5 and is designed to allow the student to gain skills to support patients in dealing with healthcare issues and to gain insight into the patient perspective of navigating encounters with different health professionals and different healthcare settings over a six month period between October and April. Students will be supported to recruit a 'patient' from within their Autumn Term module – for students in Module A, this might be a child with a chronic health condition, or a newborn baby and their family; for Module B, this will usually be a pregnant woman early on in her pregnancy; for Module C, this might be an adult with a chronic health condition, or a person with a psychiatric condition. All students will be allocated a patient pathway tutor who will meet with them once each term, together with fellow students, for a series of teaching sessions designed to support development of student skills and reflective practice around person-centred care. Students will be expected to keep a reflective diary during the course of the pathway, and to submit their reflections to tutors during each term and to module leads at the end of each term.

The Portfolio

Aims

The aims of the portfolio are to:

- encourage students to take responsibility for their own learning
- encourage reflection on learning and experience
- prepare students for postgraduate practice, where portfolios form the core of assessment in foundation and higher training, and evidence for revalidation

- provide a place for students to store evidence of their learning and experience

Overview of teaching
The portfolio supports learning in all years of the programme. It acts as a place to: complete and record progress and achievements; reflect on learning and professional development; and store required pieces of course work. In Years 1, 2 and 3, it is managed through Moodle. In Years 4, 5 and 6 it is delivered via the NHS e-Portfolio.

Years 1-3: Students use on line portfolios from the beginning of their course to the end of Year 3 (the IBSc year) to record achievements and encourage reflective learning. The contents of the portfolios may serve as a basis for discussions with their personal tutors and some items may be brought forward to be loaded into the electronic portfolio, which is introduced in Year 4.

Years 4-6: Students in these years use the NHS e-Portfolio that they will go on to use as a Foundation doctor. The portfolio for these years gathers evidence of both clinical and academic learning. Students use it to record supervised learning events (SLEs), grade forms and meetings with their personal tutor. A substantial number of reflective and achievement logs provide a place to record and reflect on particularly significant learning events or experiences. Students use the portfolio to gather feedback from their peers using the miniPAT. The portfolio is also place to gather evidence of other learning or achievement in the student's Personal Library.