



# **Programme Specification**

# **MBChB Medicine A100 5-Year Programme**

**September 2012**

**Approved by Board of Studies May 11  
Submitted to Faculty Academic Quality & Standards -Committee May.11**

## Summary

|   |   |
|---|---|
| <b>Title of Programme:</b>  | Medicine  |
| <b>Awards:</b>  |   |
| MBChB   | Successful completion of the Programme  |
| BSc Biomedical Sciences (without Honours)   | Successful completion of Years 1, 2 and 3, with passes in at least four Special Study Modules, to the satisfaction of the Year 3 Board of Examiners.  |
| Diploma in Higher Education   | Successful completion of Years 1 and 2 to the satisfaction of the Year 2 Board of Examiners.  |
| Certificate in Higher Education   | Successful completion of Year 1 to the satisfaction of the Year 1 Board of Examiners.   |
| <b>JACS Code(s):</b>  | A100  |
| <b>Date of First Intake</b>   | September 2003 (revised programme)  |
| <b>Frequency of Intake:</b>   | Annually in September   |
| <b>Duration and Mode of Study:</b>  | 5 years FT  |
| <b>Faculty:</b>   | Health & Life Sciences  |
| <b>Parent Department:</b>   | School of Medicine, Institute of Learning and Teaching  |
| <b>Other Contributors:</b><br>Other schools within the Institute of Learning and Teaching | Institute of Ageing and Chronic Disease<br>Institute of Infection and Global Health<br>Institute of Integrative Biology<br>Institute of Psychology, Health and Society<br>Institute of Translational Medicine             |
| <b>Teaching other than at University of Liverpool:</b>                                    | Students may spend a period equivalent to 16 weeks at a recognised institution that is part of the ERASMUS scheme.<br><br>Students may spend a period equivalent to 5 weeks at an approved institution on elective study. |
| <b>Professional/Statutory Body Relationship:</b>  | The programme is approved by the General Medical Council. The last GMC visit took place May 2012 and will extend into 2013  |
| <b>Fees</b>   | MBChB Clinical  |
| <b>Additional Costs to Students</b>   | Clinical clothing and equipment costs c. £300 to cover the full programme. Students may incur travel costs to placements  |
| <b>Director of Studies (or initial contact):</b>  | Professor Vikram Jha, School of Medicine  |
| <b>Board of Studies:</b>  | MBChB Board of Studies  |
| <b>Board of Examiners:</b>  | Year 1 Board of Examiners<br>Year 2 Board of Examiners<br>Year 3 Board of Examiners<br>Year 4 Board of Examiners<br>Year 5 Board of Examiners   |

|  |  |  |
|--|--|--|
| <b>External Examiner(s):</b>                                 | Year 1   | Dr Gordon Dent<br>Dr. Stuart McDonald<br><i>vacancy</i>  |
|  | Year 2   | Dr. Ariane Herrick<br><i>vacancy</i><br><i>vacancy</i>   |
|  | Year 3   | Dr. Annie Cushing<br>Dr. Aiden Byrne<br>Professor Margot Gosney  |
|  | Year 4   | Professor Paul Bradley<br>Professor Martin Orrell<br>Dr. Mairi Scott<br><i>vacancy</i><br><i>vacancy</i> |
|  | Year 5   | Dr Mairi Scott<br>Dr. Aiden Byrne  |
| <b>QAA Subject Grouping and last Subject Review Results:</b> | Medicine   | March 1999 24  |
| <b>QAA Subject Benchmark Statements:</b>                     | Medicine   |  |
| <b>Other Reference Points:</b>                               | General Medical Council's (GMC's) "Tomorrow's Doctors: Outcomes and standards for undergraduate medical education", subject to the GMC Quality Assurance of Basic Medical Education programme. |  |
| <b>Senate Approval:</b>                                      | [Date]   |  |
| <b>Review Date:</b>  | November 2003/February 2010  |  |

## A. AIMS OF THE PROGRAMME

### 1. Aims of the programme

*To ensure that students achieve the basic clinical competence required of doctors, focused on:*

1. **Knowledge & understanding** of the theoretical basis of clinical practice – including biomedical sciences, diagnostic and therapeutic rationales and perspectives on behaviour and populations
2. **Professional skills** – learning, critical thinking and appraisal, communication, and clinical skills
3. **Professional qualities & behaviour** – attitudes, conduct, ethics, accountability, teamwork, and responsibility for continuing learning, with due regard for clinical governance

### 2. Subject-based learning outcomes:

#### ■ *Subject knowledge & understanding*

1. As 'core', students will be able to synthesize, appraise, explain, and apply the relevant information/evidence about:
  - 1.1. the structure and mechanisms of the body in health and disease, from molecules up to the whole organism related to:
    - 1.1.1. normal and abnormal structure and function of the body and its defence mechanisms; the natural history, symptoms, and signs of disease; and the biological rationale for therapy and the processes underlying its complications
    - 1.1.2. variability in the role of the determinants of health and disease, the presentation of disease, and the response to therapy
    - 1.1.3. clinical diagnosis and management of common conditions
  - 1.2. the interrelationships of social, psychological, economic, political, environmental, cultural factors on health and disease
  - 1.3. the nature of good communication, the nature of health beliefs (including about alternative and complementary therapies), and how these affect people's responses to health problems
  - 1.4. public health issues related to: tackling population health determinants to promote health via disease prevention, health education, and health protection; health service organisation and evaluation; and epidemiological principles
  - 1.5. ethical, moral, and legal issues and principles concerning health; the rights and responsibilities of the patient, the doctor, and other health care professionals within society and its social and medical legislative framework (including General Medical Council guidance); and the historical perspective on health
  - 1.6. the management of acute illness and chronic disease (including disability and rehabilitation) in community and hospital
  - 1.7. alternative approaches to researching health-related research questions; and identify the implications of clinical, health (services), and laboratory research for clinical practice and health policy
  - 1.8. their learning in terms of educational principles
2. Through special study modules, students will be able to demonstrate:
  - 2.1. a broader and deeper knowledge of a number of additional fields of study
  - 2.2. a critical appreciation of the relevant background to those fields
  - 2.3. an awareness of the areas of development within those fields

#### ■ *Clinical skills*

3. In the context of social, psychological, ethical, cultural, and physical factors, students will be able to:
  - 3.1. apply scientific method (with critical appraisal skills) to manage clinical situations
  - 3.2. use 'CARE' with a systematic and incremental approach to clinical management:
    - 3.2.1. Collect information in an appropriate and discriminating manner by taking a clinical history and performing a clinical examination accurately and with sensitivity

- 3.2.2. Analyse the information to define the clinical presentation
- 3.2.3. Rationalise the differential diagnosis and the investigation and management options for that patient
- 3.2.4. Evaluate the outcome and personal performance
- 3.3. recognize and respond appropriately when a patient is sick and needs urgent management
- 3.4. manage common conditions
- 3.5. recognize less common conditions needing referral to a specialist
- 3.6. assess and manage risk, and avoid health hazards
- 3.7. apply the principles of safe prescribing
- 3.8. recognize and respond appropriately to adverse events
- 3.9. reflect on professional learning and educational needs
- 3.10. recognize their own limitations and seek assistance

#### Communication skills

- 4. In the context of social, psychological, ethical, cultural, and physical factors, students will be able to:
  - 4.1. listen effectively to patients, consistent with their communication needs, and explore their concerns and expectations
  - 4.2. recognize and respond appropriately to psychological distress
  - 4.3. explain diagnosis, prognosis, and treatment in an appropriate way to patients and relatives in terms that they can understand
  - 4.4. convey bad news sympathetically and to recognize and respond sensitively to the emotion that is generated
  - 4.5. communicate courteously and effectively with health care colleagues
  - 4.6. present (and justify) their ideas and evidence orally, in writing, and visually (consistent with *Communication Key Skill*)

#### Learning, critical thinking & appraisal skills

- 5. In the context of social, psychological, ethical, cultural, and physical factors, students will be able to:
  - 5.1. appraise critically: evidence, ‘quantitative’ study design, and data collection methods; and identify when alternative approaches, including qualitative research approaches, might be needed
  - 5.2. analyse and interpret different types of quantitative data, through the *Application of Number Key Skill*
- 6. With the *Information Technology (IT) Key Skill*, students will be able to use IT to:
  - 6.1. identify and extract appropriate information from a diverse range of sources
  - 6.2. collate and analyse data
  - 6.3. interpret and present information
- 7. With the *Managing Own Learning Key Skill*, students will be able to:
  - 7.1. plan and prioritise learning needs and prioritize time effectively
  - 7.2. undertake self-criticism and evaluation, including seeking and responding to feedback and comments and setting realistic targets
  - 7.3. demonstrate a continuing drive to learn more and manage and respond constructively to changing professional practice
- 8. For *educating others*, students will be able to:
  - 8.1. recognize and fulfil their obligation to educate others (patients, colleagues, public), demonstrating the skills and commitment required to develop their ability to educate

#### Cognitive skills

- 9. Students will be able to:
  - 9.1. articulate and use prior knowledge
  - 9.2. demonstrate that they can think critically, evaluate new information, and synthesize it with prior knowledge
  - 9.3. integrate knowledge and transfer it from one field to another
  - 9.4. reflect upon educational principles through which learning takes place

#### Professional qualities & behaviour

- 10. In the context of social, psychological, ethical, cultural, and physical factors, students will:
  - 10.1. display attitudes appropriate to fulfilling the role of a doctor in clinical practice as set out in the ‘*Duties of a Doctor (Good Medical Practice)*’ (General Medical Council, 2006)
    - 10.1.1. “*Make the care of your patient your first concern*”
    - 10.1.2. *Protect and promote the health of patients and the public*

- 10.1.3. *Provide a good standard of practice and care*
  - 10.1.3.1. *Keep your professional knowledge and skills up to date*
  - 10.1.3.2. *Recognise and work within the limits of your competence*
  - 10.1.3.3. *Work with colleagues in the ways that best serve patients' interests*
- 10.1.4. *Treat patients as individuals and respect their dignity*
  - 10.1.4.1. *Treat patients politely and considerately*
  - 10.1.4.2. *Respect patients' right to confidentiality*
- 10.1.5. *Work in partnership with patients*
  - 10.1.5.1. *Listen to patients and respond to their concerns and preferences*
  - 10.1.5.2. *Give patients the information they want or need in a way they can understand*
  - 10.1.5.3. *Respect patients' right to reach decisions with you about their treatment and care*
  - 10.1.5.4. *Support patients in caring for themselves to improve and maintain their health*
- 10.1.6. *Be honest and open and act with integrity*
  - 10.1.6.1. *Act without delay if you have good reason to believe that you or a colleague may be putting patients at risk*
  - 10.1.6.2. *Never discriminate unfairly against patients or colleagues*
- 10.1.7. *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."*
- 10.2. show:
  - 10.2.1. satisfactory attendance and be punctual, reliable, honest, respectful, courteous, and well-presented
  - 10.2.2. recognition of the impact of own health on own ability to practise medicine, and respond appropriately
- 10.3. agree to take the '*Declaration of Geneva*'
- 10.4. with the *Working With Others Key Skill*, work in teams in an interdisciplinary setting
- 10.5. tolerate uncertainty in professional practice, and demonstrate leadership as appropriate
- 10.6. be committed to advancing the science and art of medical practice for the benefit of patients, the population, the profession, and personal development

### 3. **Key skills:**

In line with the Quality Assurance Agency (QAA) Medicine benchmark statement (Section 6.1.a-i), the programme offers considerable opportunities for students to learn, to practise and to be assessed in the following key (transferable) skills:

- a. Adopt the principles of lifelong learning
- b. Retrieve, manage and manipulate information by all means, including electronically
- c. Present information clearly in written, electronic and oral forms, and communicate ideas and arguments effectively
- d. Effectively manage time and resources and set priorities
- e. Apply the principles of scientific research and audit
- f. Study topics in depth
- g. Deal with uncertainty and work within a changing environment
- h. Teach effectively and act as a mentor to others
- i. Work effectively within a team

Students who wish can gain accreditation separate from the degree, either from external awarding bodies or via the Higher Skills Development Award, which is jointly offered by all three higher education institutions on Merseyside. Students can also record their achievements for future reference, increase their awareness of their own skills and find guidance on how to develop them further by using the University's own web-based personal development planning tool, LUSID (Liverpool University Student Interactive Database).

The above key skills are integrated into the programme, some parts of the programme develop and/or assess one or more of the above key skills; most parts offer the opportunity to develop and practise them (Table 1):

**Table 1: Key Skills in the MBChB A100 programme, from Quality Assurance Agency (QAA) Medicine benchmark statement**

| <b>Key Skill</b>   | <b>Developed</b>  | <b>Opportunity to Practise</b>                                      | <b>Assessed</b>  |
|--|---|---|--|
| Adopt the principles of lifelong learning  | Problem-based learning (PBL)<br>Clinical Skills<br>Communication Skills<br>Portfolio Learning<br>Professional Education & Training Appraisal (PETA) | PBL<br>Clinical Practice  | Written Examinations<br>Oral Examinations<br>Portfolio Assessment<br>PETA  |
| Retrieve, manage and manipulate information by all means, including electronically                                 | PBL<br>Clinical Skills<br>Communication Skills<br>SSMs<br>PETA  | PBL<br>Special study modules (SSMs)<br>Clinical Practice            | Written Examinations<br>Oral Examinations<br>SSM Assessment<br>Portfolio Assessment<br>PETA                                |
| Present information clearly in written, electronic and oral forms, and communicate ideas and arguments effectively | PBL<br>Communication Skills<br>Clinical Skills<br>SSMs<br>Portfolio Learning<br>PETA<br>Critical Thinking   | PBL<br>SSMs<br>Clinical Practice<br>Critical Thinking               | Written Examinations<br>Oral Examinations<br>Portfolio Assessment<br>PETA<br>Poster<br>Critical Thinking<br>SSM Assessment |
| Effectively manage time and resources and set priorities   | All   | All   | All  |
| Apply the principles of scientific research and audit  | SSMs<br>Critical Thinking<br>PETA   | SSMs<br>Critical Thinking<br>PETA                                   | SSM Assessment<br>Critical Thinking<br>PETA  |
| Study topics in depth  | SSMs<br>Elective<br>Selectives in Advanced Medical Practice (SAMPs)   | SSMs<br>Elective<br>Selectives in Advanced Medical Practice (SAMPs) | SSM Assessment<br>Elective Assessment<br>PETA  |
| Deal with uncertainty and work within a changing environment   | Clinical Skills<br>Communication Skills<br>Portfolio Learning<br>PETA   | Clinical Practice   | Written Examinations<br>Oral Examinations<br>Portfolio Assessment<br>PETA  |
| Teach effectively and act as a mentor to others  | PBL<br>Communication Skills<br>Clinical Skills<br>Critical Thinking<br>PETA   | PBL<br>Clinical Practice<br>Critical Thinking                       | Portfolio Assessment<br>PETA<br>Poster<br>Critical Thinking  |
| Work effectively within a team   | PBL<br>Clinical Skills<br>Communication Skills<br>Critical Thinking<br>PETA   | PBL<br>Clinical Practice<br>Critical Thinking                       | Poster<br>Critical Thinking<br>PETA  |

The key skills in Communication Skills (Oral and Written), Numeracy, Information and Communication Technology, Group Work, Time Management and Managing Own Learning are developed, practised and assessed (Table 2).

**Table 2: Key Skills in the MBChB A100 programme**

| Key Skill                                | Developed  | Practised  | Assessed  |
|--|--|--|---|
| Communication Skills-Oral                | Clinical Skills<br>Communication Skills<br>Problem-based learning (PBL)                                | Clinical Practice<br>PBL   | Objective Structured Clinical Examination (OSCE),<br>Liverpool Objective Clinical Assessment System (LOCAS), Professional Education & Training Appraisal (PETA) |
| Communication Skills-Written             | PBL<br>Critical Thinking<br>Clinical Log Book<br>Elective<br>Portfolio<br>Special Study Modules (SSMs) | PBL<br>Critical Thinking<br>Clinical Log Book<br>Elective<br>Portfolio<br>SSMs | Written Examinations<br>PETA<br>Critical Thinking<br>Clinical Log Book<br>Elective<br>Portfolio<br>SSMs   |
| Numeracy                                 | Some SSMs<br>Some PBL<br>Critical Thinking<br>Clinical Skills  | Some SSMs<br>Some PBL<br>Critical Thinking<br>Clinical Practice                | Some SSMs<br>Written Examinations<br>OSCE, PETA<br>Critical Thinking  |
| Information and Communication Technology | PBL<br>Clinical Skills<br>SSMs<br>Clinical Log Book  | PBL<br>Clinical Practice<br>SSMs<br>Clinical Log Book                          | OSCE, LOCAS<br>Critical Thinking<br>Electives<br>SSMs<br>Clinical Log Book  |
| Group Work                               | PBL<br>Communication Skills<br>Clinical Skills<br>Critical Thinking<br>PETA                            | PBL<br>Communication Skills<br>Clinical Skills<br>Critical Thinking            | Critical Thinking<br>PETA   |
| Time Management                          | All  | All  | All   |
| Managing Own Learning                    | All  | All  | All   |

#### 4. Career Opportunities

This programme is for those people who wish to become qualified medical practitioners.



## B. ENTRANCE REQUIREMENTS

### 1. Academic Requirements

**Course title:** Medicine and Surgery MBChB

**UCAS code/Programme length:** A100 / 5 years

**Typical offer:**

|                                  |  |
|----------------------------------|--|
| UCAS tariff points:              | 340-390  |
| A level:                         | AAA plus B in 4th AS subject. A in Biology, A in Chemistry, and A in one other (plus at least B in the 4 <sup>th</sup> AS subject)   |
| Scottish Higher/Advanced Higher: | AABBB-AAAAA / AA<br>Highers in Biology and Chemistry must be offered at A grade. Biology and Chemistry required at Advanced Higher   |
| International Baccalaureate:     | Biology, Chemistry + one other (6, 6, 6 points) at Higher level, three subjects at SL at no less than 5. Minimum points score 36   |
| Irish Leaving Certificate:       | Not accepted on its own  |
| BTEC National Diploma:           | Not accepted on its own  |
| Access:                          | Specified Access to Medicine courses acceptable  |
| General Studies:                 | Accepted at AS level   |
| Key Skills:                      | Not accepted   |
| Subject requirements:            | Biology, Chemistry and one other subject at A level plus additional AS level. Usually 9 subjects at GCSE (grades A or B) including Maths, English and Core & Additional Science or individual Biology, Chemistry and Physics. Evidence of healthcare/people experience will be required. Successful applicants will be screened for Hepatitis B. An enhanced disclosure by the Criminal Records Bureau will also be required for successful candidates prior to admission. |

- Graduates must hold a First or good Upper Second Class honours degree:
  - in Biological, Biomedical, or Health Sciences (and dental graduates must already hold MJDF (Parts 1&2) or its equivalent. A levels must be at a minimum of BBB(b) and include Chemistry and Biology.
  - or in another subject, in which case there are additional requirements, e.g. Biology and Chemistry A-level at A grade. The Admissions Tutor will comment on a pre-application curriculum vitae

## **2. Work Experience**

- Candidates must demonstrate suitable evidence of:
  - health care career awareness/insight and
  - a caring contribution to the local community and
  - a critical, coherent, and informative approach to written communication

## **3. Other Requirements**

For entry to the MBChB programme, the ability of candidates to demonstrate teamwork and leadership skills, together with a range of additional outside interests, may be an advantage.

## C. PROGRAMME STRUCTURE

### 1. Programme Structure for students entering the programme in and after 2009/2010

#### MBChB A100 programme

|        | Pre-Semester* <sup>€</sup>  | University Semester 1   | University Semester 2  |   | Post-Semester* <sup>¥</sup>  | Exit Award          |        |
|--------|---|---|--|---|--|---------------------|--------|
| Year 1 |   | Problem-based learning (PBL) tutorials<br>Communication Skills 1<br>Clinical Skills<br>Plenary Lectures<br>Use of Human Anatomy Resource Centre (HARC)<br>Optional Practicals       | SSM1   | PBL tutorials<br>Communication Skills 1 contd.<br>Clinical Skills<br>Plenary Lectures<br>Use of HARC<br>Learning medicine in a community setting (three visits) | Assessment   | Cert HE             |        |
| Year 2 | PB L Tutorials<br>Clinical session 1 - 3 days/week<br>Plenary Lectures<br>Use of HARC   | SSM2  | PBL tutorials<br>Clinical Session 2 – 3 days/week<br>Plenary Lectures<br>Use of HARC<br>Communication Skills 2 | SSM3  | PBL tutorials contd.<br>Clinical Session 2–3 days/week contd.,<br>Plenary Lectures<br>Use of HARC<br>Communication Skills 2 contd. | Assessment          | Dip HE |
| Year 3 | Critical Thinking Module<br><br>Preparation for year 3 rotations  | Clinical Session 3 – 3 days per week - Five Rotations<br>PBL Tutorials in accordance with Clinical Rotation completion<br>Critical Thinking Module<br>Reflection on professionalism | SSM4 – 1 day per week for 19 weeks<br>Plus 2 days in week 13   |   | Assessment   | BSc Without Honours |        |
| Year 4 | Clinical Session 4 – 3 Days per week – Three rotations<br>PBL Tutorials<br>Communication Skills 3 in accordance with the Clinical Rotation  |   |  |   | Assessment   | Elective            |        |
| Year 5 | Five Clinical Attachments in rotation:<br><br>Accident & Emergency (A&E,) Foundation Year (FY) 1 Shadowing, Community, and Two Selectives in Advanced Medical Practice (SAMPs), including option to study in Europe on an ERASMUS placement for 16 weeks<br><br>...including Communication Skills 4, in accordance with the Clinical Rotation<br><br>Assessment in Year 5 is through the Professional Education and Training Appraisal (PETA) |   |  |   |  | MBChB               |        |
|        | Pre-Semester* <sup>€</sup>  | University Semester 1   | University Semester 2  |   | Post-Semester* <sup>¥</sup>  | Exit Award          |        |

\* With the exception of the first year of the five-year MBChB, all years have extended term dates compared with the University's standard two-semester year. Each year begins earlier than the University's first semester, defined above as the pre-semester period, and continues beyond the University's second semester, defined above as the post-semester period.

€ The pre-semester period begins four weeks before the University's standard year.

¥ The post-semester period extends six weeks beyond the University's standard year in Year 2 and Year 3, and eight weeks beyond the University standard year in Year 4.

Details of the length of assessment periods, and any other assessments that contribute to the summative assessments in each year, are given on Pages 20 and 21.

## THE FIVE-YEAR PROGRAMME

The programme has been designed to incorporate a spiral approach to integrated learning, continually building on prior knowledge and experience, and the curriculum core content has four main integrated themes:

- Structure & Function in Health & Disease (S&F)
- Individuals, Groups & Society (IGS)
- Population Perspective (PP)
- Professional & Personal Development (PPD)

...complemented by communication and clinical skills (i.e. consultation skills).

As students move through the successive years, they acquire progressive knowledge of the basic, behavioural, and population sciences as well as increasing clinical competence and professionalism. Learning outcomes are achieved in full at the end of the programme. Specific outcomes are introduced and developed through objectives for each year (see below). Details of the individual PBL modules are available in each of the year handbooks, and on the appropriate pages of VITAL (Virtual Interactive Teaching And Learning).

### Years one and two

The Objectives are to:

- provide a broad overview of medical science for medical practice, including health promotion, with the emphasis on normal structure and function but including some elements of disease for illustration, and in the context of psychosocial influences, population health, and professionalism.
- develop scientific method and critical appraisal of evidence.
- introduce clinical, communication, and learning skills appropriate for medical students in a problem-based learning programme.
- encourage students to take increasing responsibility for their own learning.
- introduce clinical practice with emphasis on history-taking and examination techniques through the application of clinical and communication skills.
- introduce students to the concept of the clinical logbook and portfolio, encourage the use of the logbook and portfolio to record experiences and to reflect on learning

**Year 1** serves as an introduction to the science and practice of medicine. A firm and comprehensive grounding in the medical sciences underpinning clinical practice is initiated by a **problem-based learning (PBL)** programme centred on eleven clinical scenarios designed to integrate learning in different disciplines. Although there is no direct contact with patients in the first semester, formal training in **clinical and communication skills (and the PBL scenarios)** provide clinical context. Furthermore, in the first semester, an optional **practical module** (six 3-hour practical sessions) in clinical laboratory science are offered for those students who wish to have their laboratory skills developed and assessed. A certificate of competency in laboratory techniques is awarded to those students who successfully complete the module. In the second semester, the first **Special Study Module (SSM)** is undertaken.

Students are required to attend timetabled **Communication Skills** modules each fortnight throughout the year (eleven sessions in all), and timetabled **Clinical Skills** sessions each week throughout the first year (twenty two sessions). Throughout the year, except during SSM1, one **plenary lecture** is timetabled each day, and students are timetabled to use the **Human Anatomy Resource Centre (HARC)** each week to support their **PBL**. Students are introduced to the concept of personal development planning, using LUSID, supported by their PBL facilitators. **Learning medicine in a community setting** is a community-based element that allows students to experience normality and normal variance in families and children in the context of a general practice. This includes three visits to a family with a young child, and is facilitated by community clinical teachers. Students are required to complete a portfolio, and maintain it throughout the programme into their postgraduate training..

The SSMs complement the core curriculum and are intended to broaden experience. The General Medical Council has recommended that 20- 25% of the programme consists of student-selected components. These components are designed to encourage diversity of approach, and to give choice and opportunities to explore particular interests, while developing in-

depth intellectual and practical skills essential for rigorous scientific and medical practice. Students are able to choose which **SSM**, **Clinical Elective** (see below Year 3) and **Clinical Selective** (SAMP – see below Year 5) study programmes they wish to follow. Such optional studies are designed to help them develop their individual personal and professional interests.

Each student undertakes four compulsory SSMs during the programme, spread across the first three years. Three of these comprise 4-week periods of supervised and structured study. The other, SSM4, comprises one day's study per week over a 19-week period plus an extra two days during week 13. Performance in each SSM is assessed formally through a 3000-word dissertation, and enables accumulation of merits and distinctions. This determines the individual student's final degree classification. SSMs cover a wide range of topics, including basic medical science, clinical science, behavioural science, public health/epidemiology, history of medicine, ethics, and pathology. **SSM1** takes place at the start of the second Semester.

**Year 2** introduces the normal adult lifecycle, and provides the opportunity for revision of the basic functions of the body. It comprises 15 **PBL** scenarios, two **Clinical Practice** sessions, **Communication Skills 2**, and **Special Study Modules 2 and 3**. **Plenary lectures** (four per week) and the **Human Anatomy Resource Centre** continue to support **PBL**. The concept of the clinical logbook is introduced and the personal development planning portfolio is developed using LUSID, supported, as in year 1, by the PBL facilitators.

**Clinical Practice 1** takes place during Semester 1. It comprises 14 weeks of study, with three days per week in hospitals and the community. **Clinical Practice 2** takes place during Semester 2. It comprises 14 weeks of study, with three days per week attached to clinical and specialist firms in hospitals and the community. During **Clinical Practice 1**, students make recordings of interviews (with appropriate consent) with a number of the patients. These taped interviews form the basis of the four sessions that comprise **Communication Skills 2**, which takes place in Semester 2. SSM2 and SSM3 (see above) take place during Semester 1 and Semester 2, respectively.

**Years 3 & 4** comprise two years of extensive integrated **clinical practice** and **PBL** based on the human life-cycle, supported by a specialist **Communication Skills** unit during Year 4. One **SSM**, the **Critical Thinking module**, a **professional reflective document** and an **Elective** are also included.

The Objectives are to:

- continue the study of basic medical science in the context of clinical problems encountered with patients both in hospital and in the community, and population health generally.
- move from understanding normality (Year 1 and Year 2), through recognition of abnormality (Year 3), to diagnosing disease and planning patient management (Year 4).
- refine and apply communication skills, data handling, critical appraisal skills, and evidence-based medicine.
- learn clinical methods and apply these in the community and the hospital.
- provide clinical attachments that promote awareness of the tasks and roles of doctors, the psychosocial components of illness and health, and opportunities for health promotion.
- study in-depth areas of scientific, clinical, and wider societal/population interest.
- encourage the maintenance of the clinical logbook and portfolio, partly through the identification and recording of professional ethical issues and partly through the identification of a series of core cases - the diagnosis, treatment and management of which the students should be familiar by the end of Year 4.

**Year 3** develops the recognition of adult and child abnormality and introduces patient care and management through **Clinical Practice 3**, which comprises five intensive clinical and community rotations each of seven weeks duration in: Obstetrics and Gynaecology; Paediatrics; Therapeutics and Sexual Health; Mind (Neurology, Brain and Psychiatry); and Disability. Students spend three days per week in hospital-placements for Obstetrics and Gynaecology; Paediatrics; Genito-Urinary Medicine, Family Planning and Drugs and Neurology/Psychiatry, and three days per week in Community placements for Disability. These placements are integrated with the following **PBL** sessions on one day per week: Reproductive Problems (seven weeks – Obstetrics and Gynaecology); Common Childhood Problems (seven weeks – Paediatrics); Adolescent and Adult Problems (one week each of GUM and Family Planning embedded within seven weeks Pharmacology); Introduction to Mind (seven weeks – Neurology/Psychiatry) and Common Adult Problems (seven weeks – Disability). Details are given in the Programme Handbook. In Year 3, the students are also helped to develop their

professional understanding by writing a report on professional attitudes they have observed. Together with their clinical logbook, this forms part of their professional development planning (PDP) portfolio for Year 3.

The **Critical Thinking module** is undertaken during Year 3. Students submit a research proposal, which is then peer-reviewed by other students, returned, and re-written accordingly. There are four deadlines to meet – the submission of an outline proposal, the submission of a full proposal, the peer-review of two other students' proposals, and the submission of the reworked final proposal. Support is given to help with the outline proposal which is submitted within the first two weeks of year 3, and will be returned with feedback before the end of week 4. Although the research project is never undertaken, writing the proposal requires the competence to plan a study that will yield results amenable to analysis, and also the ability to explain how the study results will be manipulated, and to justify why amendments have/have not been made. The work is summatively assessed by a team of tutors, who consider all the proposals, the subsequent peer-reviews, and final submissions together. The objectives are to enable students to:

- undertake self-criticism and evaluation, including seeking and responding to feedback and comments and setting realistic targets
- identify and access required information
- demonstrate higher-order thinking
- integrate knowledge and transfer it from one field to another
- compose specific research questions relating to their own experience
- formulate ideas for further research, based on their synthesis and critical appraisal of the information identified
- constructively criticise work prepared by others

**SSM4** takes place during the Second Semester (see above).

**Year 4** develops the diagnosis of adult and child abnormality and patient care and management through **Clinical Practice 4**, which comprises three 12-week intensive clinical and community rotations, in Adult Surgical Specialties (8 weeks) and Palliative Care (4 weeks); Adult Medical Specialties (8 weeks) and Geriatric Medicine (4 weeks); and Maternal Health (4 weeks), Child Health (4 weeks), and Psychiatry (4 weeks). Students spend a minimum of three days a week in hospital placements and one day per week in Community placements on each section of each rotation. These placements are integrated with **PBL** sessions on one day per week. **Communication Skills 3** consists of four specialist tutorials that focus on patients in palliative care and their relatives and friends.

At the end of the Second Semester, students undertake a 5-week **Elective** placement, studying an approved topic chosen by the student. The Elective is assessed separately, through submission of a 2,000-word essay. The objectives of the elective are to:-

- broaden undergraduate education.
- give students an opportunity to explore new disciplines, or old disciplines in greater depth, but it is not intended to be a period of revision or relaxation.
- encourage study in a different cultural, environmental, and social sphere, which may be outside the United Kingdom.
- give an opportunity to undertake an original research project.

Following successful completion of Year 4, students have the opportunity to **intercalate** for a period of one year. Subject to approval by the Director of Medical Studies and the appropriate Faculty, students may intercalate to first-degree level or Master degree level at Liverpool or another approved institution.

During Year 4, students can apply to be considered for the Erasmus exchange, which will be undertaken in Year 5.

**Year 5** is an intensive, apprentice-based clinical experience to prepare the graduate for the needs of the modern health service. Students undertake five 8-week **clinical attachments** on a rotational basis. These are (e.g.):

- Community (including **Communication Skills 4**); Acute Care (Accident and Emergency); Selective in Advanced Medical Practice 1 (SAMP 1); Selective in Advanced Medical Practice 2 (SAMP 2); and a Ward attachment shadowing a Foundation Year (FY) 1 doctor.

In preparation for graduation, students are required to participate in the **Patient Safety Programme**. The level of engagement with the patient safety programme will be monitored through the PETA process. The General Medical Council running a prescribing examination and a situational judgement examination which will both be compulsory for our final year students in 2011/2012.

**Communication Skills 4** consists of six half-day tutorials in advanced communication skills. The tutorials are held during the Community attachment and assessed as part of the PETA process

SAMPs are specialist options chosen by the student from a list of available attachments. These are designed to assist in career decisions.

The programme allows students to study within the **Socrates/Erasmus programme** during the Year 5 for a period of 16 weeks. The exchanges take place during the clinical selective period (SAMP 1 and SAMP 2), the timing being fixed by the rotation used above as an example, i.e. SAMP1 and SAMP2 correspond to the third and fourth attachment. The objectives are to provide Liverpool students with learning opportunities in clinical specialist subjects they would not otherwise be studying in Liverpool, and to develop further skills in a European language (appropriate skills in a European language being a pre-requisite for entry to this Socrates/Erasmus programme, and the opportunity to develop such skills being available through the University).

The Objectives are to produce a doctor for hospital or community who:

- Can critically evaluate patient problems with relevant and appropriate history and examination.
- Can show logical reasoning and decision-making on options for management for common conditions.
- Can maintain the requisite skills to undertake practical tasks in a safe and responsible manner.
- Can prescribe safely aware of risk and benefit.
- Can evaluate the outcome and recognise when things do not go as planned.
- Can recognise the uncommon and know when to seek help.
- Can help patients and relatives to deal with emotional distress.
- Can work as an effective member of a team including taking leadership and sharing in decision-making.
- Is able to communicate effectively with both patients and colleagues.
- Undertakes evidence-based clinical practice, critically appraises evidence, and takes wider influences on health into account.

**Exit awards** are possible as follows:

Following successful completion of Year 1 to the satisfaction of the Year 1 Board of Examiners: Certificate in Higher Education;

Following successful completion of Years 1 and 2 to the satisfaction of the Year 2 Board of Examiners: Diploma in Higher Education;

Following successful completion of Years 1, 2 and 3 plus four satisfactory completed SSMs, to the satisfaction of the Year 3 Board of Examiners: BSc in Biomedical Sciences.

## **2. Industrial/Work Placement/Year Abroad**

Progressively throughout years 1-4, students undertake clinical attachments outside the University at approved hospitals, clinics, or general practices, arranged by the University. Links back to the University are through tutors, the year directors, the clinical sub-deans appointed at the hospitals, and the Director of Community Studies. Assessment is undertaken through written examinations, OSCE, and LOCAS examinations, and through the clinical log-books and portfolios maintained by the students.

In Year 5, students are attached to five approved 8-week placements, two of which they choose. The students are permanently attached to and supervised by clinicians. Links back to the University are through the Director of Final Year and the clinical sub-deans appointed at the hospitals. Assessment is undertaken entirely by use of a Professional Education and Training Appraisal (PETA), portfolio assessment, and continuous assessment of the student's clinical case log.



## **D. TEACHING, LEARNING AND ASSESSMENT STRATEGIES**

### **1. Teaching, Learning and Assessment Strategies:**

#### **(A) APPROACHES TO LEARNING**

Students are encouraged to participate actively in their own learning. In Years 1-4 particularly, they are supported in developing the necessary self-directed learning skills, given the focus on producing life-long learners in medicine. The programme is structured to allow students to discuss what they are learning, and to incorporate past and current experiences.

The learning environment includes:

1. Small-group, problem-based learning (PBL) (attendance at these sessions being compulsory).
2. Training in consultation skills, through structured learning about communication and clinical skills (compulsory).
3. Clinical attachments, in small groups to hospitals, and in pairs to general practice and other community attachments (compulsory). In the early years, most but not all, these attachments are close to Liverpool, although facilities throughout the North West Region may be used.
4. Individual learning opportunities through use of the learning resources made available to the programme (see below).

#### **(I) PROBLEM-BASED LEARNING (PBL)**

The PBL programme consists of a series of, usually 2-week, 'modules', each starting with a different clinical case scenario (the 'problem').

Students are assigned to a group of 8-9 (with a trained facilitator), which explores what might be relevant to learn from each new case scenario, and shares what it already knows (activation and articulation of prior knowledge). The group then identifies collectively the most important issues that need to be researched to understand the scenario better. Clear learning objectives are therefore set to ensure a suitably broad understanding of the implications for medical practice, across the four core curriculum themes.

Students then use self-study periods to access the available learning resources detailed below. New information is integrated with prior knowledge, while exploring critically the ideas and questions that the tutorial group raised. The group meets again, about a week later, to revisit the case and the original learning objectives in the light of these studies, and to articulate, justify, and challenge understanding. Sharing knowledge and understanding leads to further integration of learning with prior knowledge and with the clinical scenario, while synthesizing concepts across the four curriculum themes - undertaking critical analysis of group and individual understanding. In this way, some aspects of the scenario are illuminated, but other areas may emerge for further study or clarification.

The depth of exploration of a particular topic depends on students' background knowledge and understanding, and on their particular inclination and interests, and the added value of group interaction and facilitation. Scenarios are carefully written to incorporate 'triggers' that prompt learning in the appropriate areas of all four curriculum themes, to the necessary breadth and depth.

PBL sessions fulfil other objectives of the programme such as developing skills in communication, teamwork, and leadership. Other objectives include: the ability to learn from and contribute to a team; to offer and to receive constructive peer-review; personal development about attitudes to learning, health issues, and medical practice; and to develop further careers insight. These objectives are formatively tutor- and self-assessed through evaluation forms and/or discussed in a progress review meeting each semester.

## **(II) MEDICAL SKILLS**

### **(i) Communication Skills**

Effective communication with colleagues, with patients and their families and friends, and with other people in the population about health issues is essential to competent medical practice, and is recognised as such by the GMC. Students undertake an integrated communication skills programme, designed to increase awareness of the skills already possessed through interacting with others. The programme then assists students to improve these skills in preparation for clinical work with patients and other members of health care teams. Communication skills are defined widely to include interactions with others (e.g. peers, senior staff, and patients), primarily through one-to-one meetings and presentations to groups, but also in writing.

### **(ii) Clinical Skills**

In the Clinical Skills Resource Centre, students acquire the core practical clinical skills that are essential to undertaking a confident and competent clinical history and examination of patients. They are also trained and passed as competent in core clinical procedures such as aseptic technique, giving injections, taking blood, and cardio-pulmonary resuscitation. The acquisition of these different skills is arranged to complement the PBL programme, and is supported from the allied resources available (notably in the Human Anatomy Resource Centre).

A session in the resource centre consists of a series of supervised workstations where students practise techniques on realistic models, and sometimes on fellow students. Computer-based learning materials are also available for the study of other clinical procedures.

## **(III) CLINICAL ATTACHMENTS**

From the second semester of the first year, the clinical skills learned in the resource centre are applied and augmented in the clinical settings of hospital and general practice. Progressively more days of the programme are taken up with clinical attachments as the student moves through the years. The experiences are recorded in the student log-books. In Final Year, all the curriculum time is within clinical placements.

Learning resources include traditional ones such as plenary-lectures, libraries, books, computer-based learning (e.g. in VITAL (Virtual Interactive Teaching And Learning)), and particularly contact with patients. These are supplemented by the learning opportunities afforded by tutorials (PBL sessions and tutor-led sessions), as well as resource centres, and the human expertise that is within the Medical School, across the University, in hospitals, and in the community.

The Final Year requires the student to practise individually with ‘hands on’ experience working as a clinical ‘apprentice’. Clinical case management is central to Final Year and its assessment. Learning is managed and assessed using a portfolio of evidence, which the students collect to describe their learning experiences and achievements. The students demonstrate progress using clinical case records as the main learning tool and method.

A large proportion of clinical time during Final Year involves clinical shadowing of junior doctors, including GPs. Students are allocated clinical supervisors who are normally consultants, specialists, or general practitioners with whom they will agree their learning objectives in relation to the specific learning outcomes for the year. The responsibilities of both students and supervisors for each attachment are described in a Final Year guide.

## **(B) LEARNING RESOURCES**

### **(I) PLENARY SESSIONS**

Large group plenary sessions in lecture theatres are timetabled, at most, once a day in year 1, upto four a week in year 2 and then as required by the different rotations in subsequent years. They are not intended to convey ‘a syllabus’ per se, but are designed to support issues that the students are exploring in PBL. They set the scene for a particular topic, highlight important issues, outline difficult and/or new concepts, give further clinical context, and/or stimulate curiosity in relevant areas.

### **(II) RESOURCE CENTRES**

The dissection of human cadavers is no longer an integral part of modern medical programmes. Learning in anatomy and histology is therefore supported by the **Human Anatomy Resource Centre (HARC)**. The Centre has specimens of human material, anatomical models, histological material, radiographs and other images, videos and computer-assisted learning programs. These facilities are arranged to enable learning in parallel with the PBL scenarios, particularly in Year 1. The HARC is organised in two parts: HARC Phase 1 and HARC Phase 2:

- *HARC Phase 1* is for the use of Year 1 students. Each tutorial group is assigned a session in the Centre. In addition, HARC is open for extra ‘overspill’ sessions for revision, or further study of the relevant material.
- *HARC Phase 2* is for the use of students in their second, and subsequent, years of the programme. Students may visit Phase 2 at their own convenience, as frequently as they wish.

**The Clinical Skills Resource Centre** (see (II)(ii) above.)

### **VITAL**

The programme is reliant on the Virtual Interactive Teaching at Liverpool (VITAL) programme, which provides on-line learning materials. VITAL, using ‘Blackboard’ as its delivery, is tailored for each year of the programme and will allow access to programme messages, e-mail, details of PBL scenarios, on-line resources, etc.. The resources include a library of radiographic images to complement the images in Human Anatomy Resource Centre (HARC) and the Clinical Skills Resource Centre, and resources to support the Population Perspective and Professional and Personal Development themes.

The University of Liverpool offers all students access to an extensive PC-network from a number of sites, including the Sherrington Building and the Harold Cohen Library, as well as from Cedar House.

### **(C) ASSESSMENT**

To give students maximum opportunity to convey their understanding and knowledge, learning outcomes are assessed by a variety of methods, including extended-matching items (EMIs), multiple-choice questions (MCQs), and short-answer questions in written examinations; continuous assessment; objective structured clinical examinations (OSCEs); Liverpool Objective Clinical Assessment System (LOCAS) (Year 4 only); and Professional Education & Training Appraisal (PETA) (Year 5 only). All written summative examinations are double-marked, blind and anonymously. The special study modules, Reflection on Professionalism report, and Critical Thinking Module are independently double-marked.

**Formative assessment** is intended to provide feedback generally and specifically, enabling students to judge how well they are progressing at each stage of the programme, and to identify strengths and weaknesses in approach. Most methods of formative assessment are informal and ongoing:

- feedback from PBL group and tutor
- guidance from the tutors on the communication and clinical skills programmes
- guidance and feedback on the portfolios from PBL facilitators, personal tutors, and clinical supervisors
- completion of self-assessment questions. These complement guidance on the breadth and the depth that directed self-learning should take at each stage of the programme.

A more formal formative assessment is in the form of:

- formative examinations, which take the same form as the summative assessment and are a major source of feedback. These give an experience of the examination format and information on progress. They are usually held in the first part of the Semester 2.

In Years 1-4, assessment is undertaken using the following methods:

MBChB A100, MBChB programme summative assessment grid, core curriculum (+non-core): 2009 entry-cohort onwards.

| Year | Knowledge & understanding (K&U)   |   |  |   | Professional skills (PS), and professional qualities & behaviour (PQB) |      |  |  |  |   |                          |                   |   |                    |     |
|------|---|---|--|---|--|------|--|--|--|---|--------------------------|-------------------|---|--------------------|-----|
| Year | Subject knowledge, understanding, application for clinical practice (SKU) | Critical analysis for clinical practice (CAfCP)                     | Key clinical features (KCF)                            | (SKU/KCF/CAfCP) Special study modules (SSM)<br>(●●◆◆✳)<br>Elective (E)<br>(●●◆◆✳) | Consultation skills: Clinical practice/clinical skills                 |      |  |  |  | Communication skills (including PQB)  |                          |                   | Learning, critical thinking & appraisal skills<br>(Cognitive skills)<br>(Working with others) |                    |     |
| 1    | Paper 1<br>◆●   | Paper 2***<br>◆●✳   |  |   | SSM1   |      |  |  |  | Community attachment  | Clinical skills OSCE     | Comm. skills OSCE |   |                    | PBL |
| 2    | Paper 1<br>◆●   | Paper 2a/b<br>◆●  |  | Paper 3<br>◆✳   | SSM2   | SSM3 |  |  |  | Clinical practice<br>Community   Hospital   | Consultation skills OSCE |                   |   | Clinical logbook   | PBL |
| 3    | Paper 1<br>◆●   | Professional attitudes [Reflection on Professionalism] report<br>◆✳ | Critical thinking module: Portfolio submission<br>●◆■✳ | Paper 3<br>◆✳   | SSM4   |      |  |  |  | Clinical practice:<br>Community   Reproductive   Child health   Psychiatry & Neurology   Pharmacology, Family planning, & Contraception | Consultation skills OSCE |                   |   | Clinical logbook   | PBL |
| 4    | Paper 1<br>◆●   | Paper 2a/b<br>◆●  |  | Paper 3<br>◆✳   | E  |      |  |  |  | Clinical practice<br>Adult surgery (S) & palliative care   Adult medicine (S) & geriatrics   Maternal & child health & psychiatry       | Consultation skills OSCE |                   | Clinical cases (LOCAS)  | Clinical logbook   | PBL |
| 5    | Selective in Advanced Medical Practice (SAMP) 1 (+PETA**)                 |   | SAMP 2 (+PETA**)                                       |   |  |      |  |  |  | Clinical practice:<br>Acute/E (PETA**)   COMP (PETA**)   Ward/S (PETA**)  |                          |                   |   | Clinical portfolio | **  |

Key: Each □ = a component that must be passed separately

|               |  |        |   |   |
|---------------|--|--------|---|---|
| Acute/E       | Acute/Emergency Care                           | OSCE:  | Objective structured clinical examination           | <b>Core themes</b><br>S&F ◆ Structure & Function<br>IGS ✳ Individuals, Groups & Society<br>PP ● Population Perspective<br>PPD ■ Professional & Personal Development |
| Comm. Skills: | communication skills for clinical practice     | PBL:   | problem-based learning                              |   |
| COMP          | Community-Orientated Medical Practice          | PETA   | Professional Education and Training Appraisal       |   |
| IPE:          | Interprofessional Education                    | (S)    | (various specialties)                               |   |
| LOCAS:        | Liverpool Objective Clinical Assessment System | Ward/S | Ward 'shadowing' preregistration house officer role |   |

|  |   |  |
|--|---|--|
| <h1>Core</h1> <p>core learning</p> <p>core learning: student-selected content</p> <p>core learning: students generate own learning objectives</p> <p>***includes History of Medicine (HoM) in PPD [...was assessed separately by poster for 2003 cohort and previously only]</p> | <h1>Non-core (plus core skills)</h1> <p>special study modules and elective</p> <p>*from programme specification</p> | ** PETA integrates assessment of K&U (e.g. critical analysis/reflection) with PS/PQB (e.g. communication/clinical skills and working with others (interprofessional)). The separate assessment of Communication Skills in the portfolio was in the 'COMP PETA' from 2006/07. |
|--|---|--|

**Summative assessment** determines whether students are fit to progress to the next stage of the programme having achieved the necessary learning outcomes.

OSCE (Years 1-4) and LOCAS (Year 4 only) form part of the summative and formative processes. These are supported by the student's communication skills and clinical skills log-books (Years 1-2), and their clinical log, (Years 2-4).

The following **four components** will be undertaken in the summative assessment periods defined in Year 1:

1. Component 1 - *Knowledge & Understanding*: up to 120 questions, comprising extended-matching items (EMIs) (2 hours).
2. Component 2 - *Critical Analysis for Clinical Practice*: up to four sections, each based on a clinical extract (a clinical research scenario or clinical practice scenario), and using EMIs and short-answer questions (2 hours).
3. Component 3 – *Objective Structured Clinical Examination (OSCE)*: a series of stations testing application of clinical skills (up to 2½ hours)
4. Component 4 - *Communication Skills Examination*: a structured communications skills examination of up to four stations (45 minutes) testing ability to listen, gain and impart information, empathize, etc.

The following **four components** will be undertaken in the summative assessment periods defined in Year 2:

1. Component 1 -*Knowledge & Understanding*: up to 100 questions including multiple-choice and EMIs (90 minutes).
2. Component 2 -*Critical Analysis for Clinical Practice*: up to four sections, one focusing on critical appraisal of evidence, and the others on ethical issues (1 hour).
3. Component 3 - *Key Clinical Features*: up to ten questions, each focused on a clinical scenario (1 hour).
4. Component 4 – *Consultation Skills Clinical Examination*: a series of stations testing application of consultation (communication and clinical) skills (OSCE up to 3 hours)

The following **three components** will be undertaken in the summative assessment periods defined in Year 3

1. Component 1 - *Knowledge & Understanding*: up to 150 questions, comprising EMIs (up to 2½ hours).
2. Component 2 – *Key Clinical Features*: up to ten questions, each focused on a clinical scenario (90 minutes)
3. Component 3 – *Consultation Skills Clinical Examination*: a series of stations testing application of consultation (communication and clinical) skills (OSCE up to 3 hours).

The following **four components** will be undertaken in the summative assessment periods defined in Year 4:

1. Component 1 - *Knowledge & Understanding*: up to 150 questions, comprising EMIs (up to 2½ hours).
2. Component 2 - *Critical Analysis for Clinical Practice*: up to four sections (90 minutes)
3. Component 3 – *Key Clinical Features*: up to ten questions, each focused on a clinical scenario (90 minutes)
4. Component 4 – *Consultation Skills Clinical Examination*: a series of items testing application of consultation (communication and clinical) skills (OSCE up to 3 hours).
5. Component 5 - *Liverpool Clinical Assessment System (LOCAS) examination*: twelve 12-minute stations normally spread over 2 days.

For Year 3, the summative assessment of the Professional Attitudes [Reflection on Professionalism] Report, Critical Thinking Module, and the Elective must be passed.

The written papers assess student understanding and development in each of the four themes of the curriculum. The practical examinations assess the students' clinical and communication skills, and progressively their ability to apply knowledge and understanding to the clinical setting, in accordance with the learning outcomes. The outcome of the Year 4 summative assessment particularly affects the award of Honours or Commendation in the final degree (see below).

Special Study Modules are also assessed separately. Performance may also affect student progress (see below).

## **CLINICAL LOGBOOKS**

Each student has a clinical logbook giving details of the cases encountered in the core clinical experience. Students are not limited to seeing those cases and are strongly advised to study patients with other conditions and experiences

too. They are expected to be familiar with the diagnosis and management of these Core Cases by the end of Year 4. Satisfactory completion of the logbook is a prerequisite for entry into the Year 4 summative examination.

Assessment in the Final Year relies on the Professional Education and Training Appraisal (PETA) mechanism and the learning portfolio. This approach to assessment encourages the student to foster a professional approach to personal development, responsibility, and adult learning. Final Year comprises five components (a 7-week clinical attachment and 1-week reflection/self-study), each of which must be completed to a satisfactory standard. Without exception, all work that contributes to assessment must be completed by the end of each 8-week period. One PETA must be completed at the end of each attachment, following a professional review of progress.

### ***THE PORTFOLIO***

From Year 1, students build their personal portfolio. In Years 1-2, this is performed online using the University LUSID system and is supported by progress review interviews with the PBL facilitators. From Year 3 onwards, the students use a paper-based system, and include reflection upon professional attitudes they have experienced or observed. When combined with the clinical log, the portfolio becomes a reflective record of achievements. Within the paper portfolio, students should write three case summaries per week, demonstrating consideration of the learning objectives. Brief details of EVERY case with which the student is involved must be entered onto the clinical computer case-log.

Students should maintain a skills log to demonstrate progress. They should record any achievements, and details of any courses or meetings attended, presentations made, or articles published should also be included. Similarly, they should record their weaknesses and explain how these have been addressed.

### **OTHER ASSESSMENTS**

The Professional Attitudes [Reflection on Professionalism] Report, Critical Thinking Module, Elective, and SSMs are assessed separately, and affect the award of Honours or Commendation in the final degree (see below):

*The Critical Thinking Module* is continuously assessed by a team of tutors. The aspects that are summatively assessed are: an abstract of a proposed project; the final project documentation after taking into account formative feedback given on the abstract; response to peer-review of the final project; peer-review given about two other proposed projects [submitted by other students]; the re-written proposed project after peer-review. This gives an overall grade for the whole collection of work, which forms part of the Year 3 summative assessment (see above).

*The Reflection on Professionalism Report* is a 1,500-word written piece completed and submitted in Semester 2 of Year 3, in lieu of an unseen written examination on ethical principles (until 2009/2010 year 3, this was via a Paper 2). It forms part of the Year 3 summative assessment.

*The Elective* is assessed through the submission of a written report (2000 words), for consideration by the Elective Assessment Group. The Elective forms part of the Year 4 summative assessment from academic year 2011/12. SSMs are assessed independently. Full details of the marking descriptors that are used in SSMs are given in the programme handbook.

## **2. Ordinance and Regulations**

This programme operates under Ordinance 45 and the Regulations under that Ordinance relating to the award of the Degrees of Bachelor of Medicine and Bachelor of Surgery. Copies of the Ordinance and Regulations are available in the MBChB Programme Handbook.

### 3. Assessment Information for Students

Further details of assessment information can be found in the programme handbook, and in each of the year handbooks.

The pass-mark for each examination is set by the Board of Examiners.

Students are required to pass all components of the Year 1 summative assessment to proceed to Year 2. Students who fail any part of the summative assessment shall be permitted to resit on one further occasion. Should they fail to achieve the pass-mark on the second occasion, their case will be considered by the School Progress Committee. In the event that they be required to re-sit the year, all clinical examinations must be re-taken irrespective of whether they were initially passed.

Students are also required to pass all components of the Year 2, Year 3, and Year 4 summative assessments to proceed to the subsequent year. Students who fail any part of the summative assessments shall be permitted to resit on one further occasion. Should they fail to achieve the pass-mark on the second occasion, their case will be considered by School Progress Committee.

Students are required to successfully complete a portfolio of learning and five PETA assessments in Year 5 to qualify for the award of MBChB. Students will be allowed to repeat a failed PETA on one occasion only. Should they fail to pass the PETA on the second occasion, their case will be considered by Faculty Progress Committee.

The final classification of the award shall be determined as follows:

**For A100/A105 students entering year 1 of the programme before 2009 and A101 students entering in 2009**  
The degrees of MB and ChB with *Commendation* or with *Honours* will be awarded to students who **at the first attempt**:

- ◆ Satisfy the examiners in the Year 4 Assessment;
- ◆ Satisfactorily complete the five final year attachments;
- ◆ Satisfy the examiners in the Critical Thinking module;

For a *Commendation*, a Pass must be achieved, **at the first attempt**, in all six Special Study Modules, of which at least four must be at a higher grade.

For *Honours*, a Pass must be achieved, **at the first attempt**, in all six Special Study Modules, of which at least two must be at Distinction level and another two Merit.

**For A100/A105 students entering year 1 of the programme in 2009 and A101 students entering in 2010**

The scoring system approved for the UK Foundation Programme Office (UKFPO) ranking will be applied. Students in the top quartile will be awarded the degree of MB and ChB with commendation. Students in the top 10% of their cohort will be awarded MB and ChB with honours.

**The calculation currently approved for UKFPO ranking is as follows:**

The score is derived from the information held in the 'SPIDER'. Students are currently given their interim ranking scores at the start of the penultimate year and their final ranking score at the start of their final year.

#### Written papers/communication skills examinations/SSMs

| Result band    | Score |
|----------------|-------|
| 85/DISTINCTION | 3     |
| 75/MERIT       | 2     |
| 65/PASS        | 1     |
| Second attempt | 0     |

#### **OSCE and LOCAS**

Score 3 if passed at first attempt

Score 0 if passed at second attempt

## **Critical Thinking Module submission, Elective Report, Reflection on Professionalism Report**

Score 3 for a pass

Score 1 for a resubmit with amendments

Score 0 for a fail

### **The calculation**

There are a number of considerations. We have three groups of students on the programme: those on the 5-year programme, the graduate-entry students (4-year programme), and the students who enter from the International Medical University (IMU) (2-year programme). Year 4 of the programme carries more weighting than the earlier years, as it has the final summative examinations. This weighting affects each student group differently, and the calculation below minimises that distortion. The interim rankings at the start of the penultimate year are based on 3 (A100/A105), 2 (A101) and 1 (A100 IMU) year(s) of data, respectively.

- We calculate the average score for each year (total score of assessments for the year divided by the number of assessments in that year).
  - The maximum score for each year is therefore 3.
- We then multiply that number by 2 for years 1-3 (year 4 is multiplied by 3, to increase its weighting).
  - The maximum weighted score for each year is therefore 6 for years 1-3 and 9 for year 4
- We then add the scores for each year together, and use the average by dividing the result by
  - 4 for conventional A100 students (5-year programme)
  - 3.111 for A101 students (4-year programme)
  - 2.222 for A100 students from the IMU (2-year programme)
- Each student will therefore have a maximum score of 6.75.
- Then we rank students according to their score, and assign quartiles

## **4. Student Representation and Feedback**

A Student Parliament, which operates in accordance with the University Code of Practice on Student Representation, and is the equivalent of a Staff/Student Liaison Committee, has been established. The Parliament normally meets twice per semester. The membership of the Parliament, its terms of reference, and the manner in which it conducts its business conform to the requirements of the Annex of the Code of Practice on Student Representation. Elections to the Parliament are carried out within the structure determined by the Liverpool Medical Students Society. Representatives are encouraged to attend the training provided for them through the Guild.

Two student representatives from each year of the programme sit on the Board of Studies.

Module and programme evaluation is undertaken at the completion of each activity e.g. PBL, SSM, Clinical Rotation. This information is used to determine student satisfaction. Information is fed back to students through open forums, the programme website and VITAL

## **5. Status of Professional/Statutory Body Accreditation**

The programme is recognised by the General Medical Council (GMC) as providing the necessary training to allow graduates to enter the pre-registration (Foundation) training programme. It was assessed and approved by the GMC in 1999, and was found satisfactory in the pilot GMC Quality Assurance of Basic Medical Education process in 2003/2004.

## **6. Marking descriptors**

The marking descriptors for the Special Study Modules are available in the SSM handbook



## **7. The Board of Examiners and the External Examiner**

The Board of Examiners, guided by the External Examiners shall:

- Determine the pass-mark for each examination
- Take into account all circumstances relating to the performance of individual students. (This will include personal circumstances notified to the Director of Medical Studies in accordance with the University's Code of Practice on Assessment).
- Be responsible for the general conduct of the assessment of the programme of study.
- Consider and determine for each student the marks/grades for each form of assessment
- Make recommendations on the progression of each candidate to the next stage of the programme, and when appropriate, for the award of Degrees, Diplomas, or Certificates of Higher Education.

Full details of the marking descriptors that are used in SSMs, further assessment information, rules relating to re-sit examinations, students progress procedures, rules relating to plagiarism and collusion, and the circumstances in which special factors including ill-health may be taken into consideration by the Board of Examiners, and the students' responsibilities for informing Boards of Examiners of such are provided in the MBChB generic handbook.

External examiners are responsible for ensuring that awards made by the University of Liverpool are of a comparable standard with those of similar subjects and awards of other Higher Education Institutions in the United Kingdom, as stated in the Code of Practice on External Examining.