# Subject Benchmark Statement

# Medicine

2021

Quality Assurance Council of University Grants Commission – Sri Lanka

# SUBJECT BENCHMARK STATEMENTIN MEDICINE

**Quality Assurance Council**
**University Grant Commission**
**Sri Lanka**

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## FOREWORD

Subject Benchmark Statements provide a set of reference points to show how the key features of a programme of study, its intended learning outcomes, and the standards that derive from these intended outcomes, relate to what is deemed appropriate by the subject community.

During the period 2003 - 2013, about 40 Statements were developed by subject committees for programmes offered by the state universities in Sri Lanka, under the guidance of the Quality Assurance & Accreditation Council and the University Grants Commission. Subsequent to adoption of the Sri Lanka Qualifications Framework by the University Grants Commission in 2016, it was decided that these Statements should be revised and updated, particularly to takeinto account the requirements stipulated in the SLQF 2015, and to incorporate recent developments in each field of study.

Subject Committees were appointed by the UGC for this purpose, drawing on expertise within each subject community both within and outside academia.

The new Subject Benchmarks Statements are meant to provide:

- institutions and academic staff with a framework for articulating the intended learning outcomes of programmes, in the context of SLQF 2015;
- institutions with a minimum standard for the award of a degree in a particular subject area;
- peer reviewers with a reference point for making judgments about the appropriateness of programme outcomes and their achievement;
- students, employers, professional bodies and others with the information about the range of provision in particular subject/discipline areas, the qualities developed in graduates, and the standards that would of graduates;
- the public at large with the information about the nature of higher education awards

# 1 Introduction

## 1.1 About this Subject Benchmark Statement (SBS)

Subject benchmarking is an essential component of quality assurance in the university system. This SBS in Medicine provides guidelines and an academic reference point for courses leading to the award of medical degrees in Sri Lanka. It describes the essential characteristics which will enable a graduate in medicine to function effectively, initially as an intern house officer, and on satisfactory completion of internship, as a medical officer providing independent primary care, or in the state or private sector institutions (i.e. general professional practice), or as a trainee in a postgraduate programme leading to further specialisation. When revising the SBS, the training requirements that address the evolving healthcare needs of the society were taken into account. Hence, this SBS provides medical faculties, internal and external programme reviewers and external examiners with a common and explicit academic reference point. It also provides an authoritative and widely recognized statement of expectations of a medical graduate in a form readily accessible to students, employers and other stakeholders. Additionally, this document will facilitate international comparison of MBBS (Bachelor of Medicine & Bachelor of Surgery) degree with relevant other degrees.

The MBBS degree programme leads to a professional qualification that requires the graduates to be registered with the Sri Lanka Medical Council (SLMC) after internship, while fulfilling the minimum standards specified by the SLMC at entry, during the degree programme and the internship training. The Medical Ordinance (Chapter 105) of 1988 empowers the SLMC to formulate regulations for the maintenance of minimum standards of medical education including standards relating to courses of study, examinations, staff, equipment, accommodation, training and other facilities at the universities and other institutions which grant or confer any qualification which entitles a person to obtain registration under the Ordinance. This SBS complements the SLMC's minimum standards for medical education. All degree programmes in the country should address this statement when planning, delivering and evaluating their MBBS degree programme to undergraduates.

The first version of the SBS in Medicine was published by the Quality Assurance and Accreditation Council (QAAC) in 2004. The work in connection with revision of this SBS began in December 2019 as a part of the overall quality assurance framework that supports academic standards and, in the furtherance, and dissemination of good practices in Universities in Sri Lanka. A 20-member panel

of professors were selected to represent the subject disciplines. The statements of the previous SBS were re-categorised according to the SLQF learning outcomes, as far as possible. The SBS committee was divided into 12 subcommittees to revise the statements categorised under each learning outcome identified in the Sri Lanka Qualifications Framework (2015 version). Extensive revision took place over seven meetings that included six Zoom-based meetings and one face to face meeting, to comply with the COVID 19 pandemic related health and safety guidelines. Based on the new Quality Assurance Council (QAC) format for SBS development, sections other than the learning outcomes were also extensively revised.

### 1.2 Summary of the changes from the previous SBS

The previous SBS was used as the basic document. It was extensively revised, to conform with the learning outcomes set out in the SLQF 2015 and to adhere to the current format prescribed for developing the SBS. Additional information has been included in relation to teaching/learning (T/L) methods and assessment methods.

### 1.3 Defining principles

The revised SBS is based on the principles of outcome-based education and student-centred learning. Hence, the statement collectively defines the final outcome of the degree programme, i.e. the MBBS graduate. The learning outcomes used are the SLQF learning outcomes. The statement does not attempt to assign a specific weight to each learning outcome within the overall degree programme. Instead, it is left up to the individual study programmes to find the best mix of the 12 learning outcomes that would address all the components of this statement. T/L methods and assessment methods have also been identified based on the principles of outcome-based education and student-centred learning. The individual study programmes should use the T/L and assessment methods as aguide to select the most appropriate methods that fit their programme. Additionally, the individual programmes can select any appropriate method that has not been specified in this document.

## 2 Degree programmes covered by this Statement

This statement is concerned with professional degree courses leading to the award of the MBBS degree. This is the undergraduate degree in Medicine awarded by allthe Faculties of Medicine in Sri Lanka (some are named as Faculty of Health Sciences and Faculty of Medicine and Allied Health Sciences). Faculties of Medicine are encouraged to develop their own innovative approaches in designing and delivering their courses within the broad framework described here.

The minimum credit requirement for the MBBS degree programme should be 150 credits, to be completed during five academic years. In the credit allocation for the clinical training component, the calculation of a credit should be based on the SLQF defined industrial training standards, which is 100 notional learning hours per credit.

## 3 Nature and the extent of the study programme

### 3.1 Integration of subject areas is a key feature:

This statement covers the following broad subject areas: basic/pre-clinical sciences, applied/para-clinical sciences, clinical sciences, public health and behavioural sciences/medical humanities. The course provides the undergraduate with intellectual skills such as analysis and reflection, problem solving and clinical reasoning, and has vocational, ethical and legal components. In keeping with global and regional trends, elements of vertical and horizontal integration across subjects should be introduced by all faculties and be supported by relevant administrative structures.

### 3.2 Clinical training is an essential component:

Additionally, the subject of Medicine is characterized by having a significant component of clinical skills training and appropriate attitudes. Professional standards are of great importance as is the ability to work together with other healthcare professionals. The acquisition of clinical skills involves learning from patients under the supervision of clinical teachers, who are usually medical practitioners. The training sites include hospital, primary care, community and home settings. Simulated training through the use of skills laboratories and simulated patients should be promoted particularly with regard to invasive procedures and sensitive history taking. While universities are responsible for the core organization and assessment of training programmes in medical education, the clinical training is arranged and provided with the active participation, guidance and cooperation of those clinical teachers, including other healthcare professionals, that constitute the extended faculty.

### 3.3 Electives/Selectives are encouraged:

The medical course leads to a professional degree where the core curriculum is compulsory. In addition to the core curriculum opportunities for student choice with regard to topics of diverse learning not extensively covered by the core curriculum should be encouraged through periods of electivestudy.

### 3.4 Intercalated degrees may be offered:

The faculties may decide to introduce intercalated degrees as per global trends. However, this should not in any way compromise the duration or quality of the training leading to the MBBS degree. At least 12 months (or equivalent to 30 credits) of additional study or research would be required for award of an intercalated degree.

### 3.5 Exit options are offered to those who do not complete the MBBS degree programme:

Options should be made available to undergraduates, who are unable or unwilling to complete the MBBS course. These will be awarded provided that they have fulfilled certain minimum academic criteria. It is desirable for all Faculties of Medicine to develop such **exit** ('fall back') options for students who are unable or unwilling to complete the MBBS course. However, such qualifications are not equivalent to the professional degree of MBBS and will not entitle them to register with the SLMC as a medical practitioner. Those qualifications should follow the relevant SLQF level requirements.

## 4 Aims and objectives of the study programme

The broad aim of the programme is to develop a holistic graduate with requisite knowledge, skills, attitudes and mind-set. These graduates should be capable of successfully completing internship, practising in promotive, preventive, curative, rehabilitative and palliative sectors in primary/community-based, secondary and tertiary healthcare settings in Sri Lanka, while undertaking further learning.

## 5 Subject-specific learning outcomes in core areas

SLQF learning outcomes describe the attributes and competencies of a generic Sri Lankan graduate. The following attributes and competencies are customized for a Sri Lankan medical graduate. The committee is of the view that one of the key attributes of medical practice is compassionate care.

### 5.1 Subject / theoretical knowledge

Graduates should be able to explain the scientific basis of:

- the genetic composition of the human body, its inheritance and early developmentof human beings;
- the normal structure and function of the different organ systems of the humanbody, the human mind and their inter-relationships;

- anatomical, physiological and biochemical changes, and nutritional requirementsduring the life cycle;
- physiological and biochemical foundations of regulation of body functions andhomeostasis;
- the risk factors, aetiology, pathogenesis, pathology, and natural history of diseases;
- signs and symptoms of diseases, investigations, differential diagnosis, diagnosis, pharmacological agents and non-pharmacological methods used in management of diseases;
- management of emergencies;
- pharmacological foundations of therapeutics, adverse reactions to therapy, medication errors, curative and palliative therapy;
- disability and rehabilitation;
- uses and limitations of healthcare systems of medicine;
- psychosocial and socio-cultural interactions with illness using behavioural sciences, medical anthropology, sociology, and basic psychology;
- learning and continuing education with the use of the underlying educationalprinciples;
- values, ethics and legal aspects in relation to practice of medicine in Sri Lanka; the role of the family and extended family, formal and informal social support systems, and their inter-relationships and interactions;
- interpersonal interactions using principles of communication;
- the use of demography and vital statistics in relation to medical practice;
- the use of basic, applied and clinical epidemiology in relation to medical practice;
- principles of evidence-based practice of medicine;
- scientific method, basic statistics as applied to medicine;
- patient safety and safe practices in the hospital and community settings;
- health promotion, prevention and screening for diseases;
- taking a history, conducting a physical examination and performing an autopsy inrelation to medical legal practice
- needs assessment and healthcare planning;
- healthcare management and health economics;
- the organisation of curative and preventive healthcare services in the country;
- healthcare provision in disaster situations; and
- concepts of global health (including green concepts and climate change).

## 5.2 Practical knowledge and application

### 5.2.1 *Clinical skills*

The graduate should be able to:

- obtain relevant information from a history which is patient-centred, socio-culturallyand emotionally sensitive, structured and relevant;
- perform a relevant and systematic physical and mental state examination in a sensitive manner, appropriate for age, gender, culture and clinical condition;
- formulate a diagnosis or differential diagnosis or identify a problem list based onhistory and examination, using a sound clinical reasoning process;
- select appropriate investigations and interpret their results;
- decide on treatment based upon clinical findings, evidence and patients' wishes;
- record the findings of the history, examination, investigations, diagnosis and management in a patient medical record which can be in paper or electronic format
- plan patient management in a holistic manner appropriate for primary, secondaryand tertiary levels of care, recognizing the following:

    a. importance of socio-economic status and cultural background
    b. importance of discussing the management plan with the patient, or ifappropriate, a relative or carer
    c. effect on the patient and household or family
    d. relevance of age
    e. requirements for informed consent
    f. need for teamwork including handing over of work to others
    g. need for appropriate referrals
    h. financial constraints
    i. impact on occupation and future abilities to work

- document and communicate appropriately, including writing a rational and safe prescription and effective communication of medication instructions and information on medicine
- perform practical and technical procedures, including investigative and therapeutic measures, which are relevant to general professional practice in Sri Lanka, while being cognisant of the costs, risks, hazards to the individual and the health system, and emerging situations;
- take a history, conduct a physical examination and perform an autopsy in relation to medical legal practice
- provide care with competence, empathy and compassion, taking into consideration the values and duties of a doctor.

Graduates should be able to take into consideration the following contextual factors when developing a management plan for a patient:

- emergency situations which require immediate action such as carrying out the initial treatment;
- conditions which require early or immediate intervention, so that they can, under appropriate supervision, initiate and be involved in the care of acutely ill patients;
- health needs of patients with chronic illness, disability and special needs to initiate relevant medical investigations and interventions and/or plan management;
- care for patients in ambulatory settings, home environment and hospital settings (primary, secondary and tertiary levels of care) and in urban, rural, and estate environments;
- multi-disciplinary and multi-professional teams involved in the management of patients in need of social support, rehabilitation or palliative care, including careof the dying; and
- emerging situations such as pandemics and disasters.

### 5.2.2 *Population health, planetary health, primary healthcare and health systems*

The graduate should be able to promote and protect health by:

- relating the underlying science of health and disease to screen populations and patients and arrive at a community diagnosis;
- recognising and giving advice on health promotion and empowering communities on disease prevention based upon the socio-economic, behavioural, environmental and other factors that impact human health and contribute to health inequalities;
- providing advice on healthy lifestyles and effective use of medicines to general public, particularly with regard to child health, adolescent health, maternal health, mental health, geriatric care and care of the differently abled;
- considering the industrial/occupational, dietary and environmental aspects that lead to detrimental effects on the planet and its living beings; and
- contributing to disease surveillance at institutional and community settings.

The graduate should be able to apply the principles of project or programme management in:

- planning, implementing, monitoring and evaluating health programmes or projects;
  recognising the roles of people and agencies who undertake work in the promotion of public health;

- liaising with different sectors of the health and social care systems and managing those components relevant to the care of the patient;
- engaging and building community capacity and reducing health inequities and disparities.
- Giving due consideration to epidemic and pandemic response, international health regulations and health issues of vulnerable/marginalised segments in the population.

The graduate should be able to:

- apply the concepts of patient centred philosophy of primary care and assess itsimpact on health and disease of the patient and the family;
- identify common symptoms and problems in a primary care setting and explainhow their presentations and management differ from those seen in hospital wards;
- manage consultations and sustain a good doctor-patient relationship;
- deliver primary care at urban, rural and estate environments, taking into consideration the psychological, social and cultural effects on health and illness behaviour; and
- manage palliative care in the home setting.

### 5.3 Communication skills

Graduates should be able to:

- actively listen and respond appropriately to patients, relatives and carers, givingadequate time;
- recognize how factors such as grief, or anxiety about illness and disabilities mayinfluence communication by the patients, relatives and carers;
- empathically recognise and respond to the patient's individuality, ideas, concerns,expectations regarding the illness, medications and management;
- recognise and respond appropriately to the ethnic, socio-cultural and religiousbackground of patients, families and community;
- provide adequate, clear and appropriate information, advise patients and carers,and respond to their questions, in clear, non-technical terms;
- mediate and negotiate appropriately with patients, and carers in relation to care;
- explain procedures, investigations, the therapeutic plan in a culturally appropriatemanner;
- handle concerns of patients and their complaints appropriately;
- respond appropriately to those with bereavement and grief;
- communicate 'bad' news;

- respond to patients and carers in end-of-life situations;
- listen and respond to other healthcare professionals and colleagues;
- liaise with other members of the health care team;
- engage in medical teaching for healthcare teams;
- interact with the general public and media, for example to increase awareness oncommon disorders, safe and effective use of medicines, disease prevention and health promotion;
- interact in special situations including courts of law and groups with special needs;and
- communicate ideas and arguments effectively.

It is desirable that graduates are able to:

- communicate in Sinhala, Tamil and English; and
- display proficiency in the English language at a level necessary for their professional activities.

### 5.4 Teamwork and leadership

Graduates should be able to:

- promote and act with collegiality and inter-professional collaboration;
- work within the limits of their responsibility and capability;
- make collective decisions with the healthcare team; and
- give leadership when required in clinical and community settings.

### 5.5 Creativity and problem solving

Graduates should be able to critically evaluate information and use reasoning and personal judgment to:

- identify and prioritise clinical problems;
- arrive at a diagnostic hypothesis;
- draw up a management plan; and
- plan preventive and health promotive actions.

Graduates should be able to apply scientific method in terms of:

- reviewing the literature for evidence-based practice or research;
- formulating research questions or hypotheses;
- applying statistical concepts; and

- using methods for collection, analysis and interpretation of research data.

Graduates should be able to demonstrate creativity and resourcefulness in:

- professional development;
- clinical practice;
- institutional and infrastructural development; and
- research, including writing and presenting scientific material.

### 5.6 Managerial and entrepreneurship skills

In the practice of medicine, entrepreneurship should be considered mainly for effective functioning as a medical practitioner and for institutional development, rather than for individual profit. The following benchmark statements have been written with this central concept in mind.

Graduate should be able to:

- explain the economical, socio-political and cultural aspects of health;
- describe the health system in the country and different healthcare systems globally;
- explain different types of healthcare organizations including public, private and non-governmental, their governance, operational methods and management (including human resource management);
- explain basics of healthcare planning, prioritization of services and basic concepts of health economics;
- generate, develop and communicate ideas and gain support to deliver successful healthcare outcomes;
- assess critically and apply appropriately new concepts in healthcare delivery supporting new ventures;
- manage utilization of available resources optimally and efficiently;
- be accountable and responsible for professional decisions including cost-effectiveness of healthcare; and
- explain the role of 'private sector healthcare' in Sri Lanka.

### 5.7 Information usage and management

Graduates should be able to:

- explain the difference of data, information and knowledge;
- create and retrieve information of all types, including electronic information, and manage appropriately the information available in regard to clinical care and patient information;

- present information clearly in written, electronic and oral forms in a culturally appropriate manner;
- produce and maintain contemporaneous, legible, accurate and pertinent records forpatients under their care;
- ensure that records are duly completed, signed and dated, as well as filed andstored appropriately in a timely manner;
- demonstrate the basic skills of using a basic electronic medical record for continuity and lifelong care
- analyse, interpret, objectively evaluate and prioritise information, while recognising its limitations;
- respect and protect confidentiality of information;
- explain the basic concepts of using big data and other data computing methodsrelated to health issues;
- function in an environment where information and communication technology areplaying an increasing role; and
- use information and communication technology to facilitate lifelong learning andkeeping up to date.
- conduct remote consultations using technologies such as telemedicine.

### 5.8 Networking and social skills

Graduates should be able to:

- identify and productively engage in activities of professional bodies;
- respect diversity, cultural sensitivity and equity in all aspects of social engagement for the betterment of patients and/or community;
- liaise with individuals, institutions and organizations in discharging his or her duties in regard to vulnerable and needy patients, their households and communities;
- liaise with individuals, institutions and organizations (situated locally or overseas) under special circumstances such as pandemics and disasters;
- demonstrate skills in awareness and management of one's own emotions, awareness of others' emotions, and relationship management; and
- use media (including social media) ethically, legally and professionally, within the guidelines given in the Establishment Code and other applicable rules and regulations.

### 5.9 Adaptability and flexibility

Graduates should be able to demonstrate:

- flexibility in working with patients and with colleagues in the healthcare team;
- adaptability when faced with changing circumstances in clinical practice and in

professional development, as well as in supporting the development of their institutions;

- both flexibility and adaptability when engaging in research;
- adaptability and flexibility when working in resource poor settings; and
- responsibility and flexibility to be resilient, and appropriately assertive to plan organize and manage work.

### 5.10 Attitudes, values and professionalism

In the practice of medicine, appropriate attitudes, values, empathy and professionalismis of crucial importance.

Graduates should be able to:

- recognise the importance of the 'doctor patient relationship' in all aspects of patient care;
- take care of patients as their first concern and adopt a humane, compassionate,empathic and holistic approach to patients and patient care;
- respect patient autonomy and involve patients, or where appropriate, guardians,relatives or caregivers as partners in therapeutic and management decisions;
- recognise and respect different cultures, values, views and beliefs;
- recognise the use of alternative medical practices and recognise the patient's rightto opt for these practices;
- deliver healthcare in a non-judgmental and non-discriminative manner and avoidstigmatizing any category of patients;
- engage in reflective practice, audit and performance appraisal of their own work,and the work of their professional colleagues;
- maintain the trust in themselves and their profession by being open, honest andacting with integrity;

  recognise the pressures on themselves and colleagues created by a busy professional career, be aware of important issues in self-care (e.g. stress reduction, avoidance of unhealthy practices such as alcohol misuse, substance abuse and self-medication) and maintain a work-life balance to ensure one's own wellbeing in theprocess of achieving personal and professional goals;
- manage their time efficiently and prioritise work effectively; and
- be concerned about patient safety and take prompt action if they think patient safety is being compromised.

Graduates are expected to apply ethical and legal knowledge to their practice,particularly in:

- applying the principles of confidentiality, consent, accountability, honesty and integrity;
- dealing effectively with personal illness, complaints about their own practice or behaviour, or that of colleagues in regard to adultery, addiction, advertisement, association, fraud, force, fee splitting, failure to attend, etc.;
- being aware of and complying with legal and professional responsibilities, with respect to the issue of medical certificates, notification of infectious diseases, death and dying, drug prescribing, mental health, physical and sexual abuse of children and adults and abortion; and
- abiding by laws, professional codes and patient rights.

### 5.11 Vision for life

Graduates should be able to:

- develop long-term personal and professional goals to achieve self-esteem and self-actualization with due consideration of societal responsibilities;
- formulate plans and develop new competencies, which are necessary to achievepersonal and professional goals; and
- identify, prepare and face challenges in achieving personal and professional goals.

### 5.12 Lifelong learning

Graduates should be able to:

- exercise self-awareness, reflect on their performance and personal capability, recognize the limits of their competence and be receptive to feedback;
- manage their learning with respect to continuing professional development; and
- cope with uncertainty and error in decision making by:
  a. seeking out information when needed;
  b. continuous self-audit and reflective practice; and
  c. acceptance of peer review.

## 6 Teaching, learning and assessment process

The table below provides examples of commonly used teaching and learning methods that can be used to achieve the SLQF learning outcomes.

| **Categories of Learning outcomes** | **General student-centred teaching and learning methods recommended by SLQF** | **Specific Student-centred teaching and learning activities in Health Sciences** |
|---|---|---|
| 1. Subject / Theoretical Knowledge | Independent learning activities, interactive lectures, team-based learning, and other small group activities | A basic sciences lecture or a self-learning lesson interspersed with some quizzes (or other such activities) for the learner to self-assess or enhance the theoretical understanding of the learning material. |
| 2. Practical Knowledge and Application | Problem-based learning, team-basedlearning, inquiry-basedlearning, practical classes, laboratorysessions, role play | (a) A lesson either based on a clinical scenario/s or a lesson incorporating a clinical scenario/s, where the students either individually or in small groups address the issues in the said scenario/s, as if they encountered the said scenario/s in an actual clinical setting.<br>(b) Conducting either a full or a part of a patient encounter.<br>(c) Conducting essential clinical procedures and manoeuvres.<br>(d) Practical sessions in the laboratory or a field session in the community and in field based settings.<br>(e) Research projects.<br>(f) Elective programmes. |
| 3. Communication | Student presentations, role play, debates, dramas | (a) Taking and presenting a history in the actual clinical setting or as a role-play.<br>(b) Breaking bad news.<br>(c) Delivering health promotion talks or developing health promotion material.<br>(d) Communicating with other healthcare professionals regarding patientmanagement.<br>(e) In-class student presentations/role plays.<br>(f) Writing a referral letter |

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| 4. Teamwork and Leadership | Group projects, industrial training, small group learning; e.g. problem-basedlearning, games | (a) Students working together in a small group learning session such as a PBL.<br>(b) Contributing to the management of a patient in the clinical setting; e.g. monitoring a patient.<br>(c) A group project as an elective or a research |
| | | activity. |
| 5. Creativity and Problem Solving | Assignments, projects, small group learning activities; e.g. problem-based learning | Any or all of the following (a-e) performed either individually or within a small group learning session in a simulated (i.e. in-class) or actual clinical setting.<br>(a) Discussing the pros and cons of different patient management plans.<br>(b) Discussing the best option in an ethical dilemma.<br>(c) Reasoning out the pathophysiological basis for an actual or hypothetical (e.g. paper-based) patient condition.<br>(d) Justifying a clinical diagnosis, ordering of investigations or a treatment plan.<br>(e) Reasoning out the pathophysiological basis for a treatment plan for an actual or hypothetical (e.g. paper-based) patient condition.<br>(f) Field work, project reports, assignment based reports.<br>(g) Research project with a report or dissertation. |
| 6. Managerial and Entrepreneurship | Group projects, industrial training, small group learning; e.g. problem-based learning, games, simulated training, industrial (workplace-based) training | Any or all of the following performed either individually or within a small group learning session in a simulated (i.e. in-class) setting.<br>(a) Improvising to bring about the best patientoutcome in a resource-poor setting.<br>(b) Manage limited resources to prioritize onthe most-needy patients.<br>(c) Applications on health economics, medical administration and healthcare systems. |

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| 7. Information Usage and Management | Assignments, presentations, projects,case studies | (a) Documentation, access, retrieval andstorage related to medical/health records.<br>(b) Conducting a literature search.<br>(c) Practising best-evidence medical care(EBM).<br>(d) Participating in epidemiological studies.<br>(e) Learning from an e-learning module.<br>(f) Preparing and delivering a presentation using multi-media.<br>(g) Preparing and submitting case reports,<br>assignments using an electronic learning system. |
| 8. Networking and Social Skills | Student presentations, role-play, debates, dramas | Any or all of the following performed either individually or within a small group learning session.<br>(a) Responding to or initiating a forum post in the learning management system.<br>(b) Establishing links with experts in the field electronically or face-to-face (e.g. during conferences, symposia or workshops) to engage in professional discussions.<br>(c) Working with patient groups or patient support groups.<br>(d) Conducting health promotion activities in<br>the community. |

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| 9. Adaptability and Flexibility | Group projects, industrial training, small group learning; e.g. problem-based learning, role plays, portfolios | Any or all of the following performed either individually or within a small group learning session in a simulated (i.e. in-class) setting or in real-life setting, as the case may be.<br>(a) Customizing a management plan based on the patient needs.<br>(b) Using multiple modalities of learning to suit a given situation; e.g. learning from patients, other healthcare professionals, web searches, etc.<br>(c) Accommodating the needs of other healthcare professionals in managing a patient.<br>(d) Considering multiple options and their consequences for a given problem, and changing one's own course of action accordingly. |
| 10. Attitudes, Values and Professionalism | Group projects, industrial training, small group learning; e.g. problem-based learning, role play, portfolios | Portfolio entries, workplace learning situations, small group learning activities to show:<br>(a) empathy and emotional intelligence in all clinical and professional activities; e.g. patient management, engaging with other health professionals, engaging with patient relatives.<br>(b) adherence to good medical practice as outlined by professional organizations such as SLMC, GMC. |
| 11. Vision for Life | Portfolios, reflective practice | Portfolio entries, electives or other assignments/projects showing the ability to work towards a common long-term goal related to the learner's own ambition, career-goal or |

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| | | preference. |
| 12. Updating Self / Lifelong Learning | Portfolios, reflective practice | Portfolio entries or other assignments/projects that require the student to identify their own learning needs and achieve those learning needs by systematically going through the steps of an established reflective learning cycle. |

**Note:** All the above teaching and learning activities should ideally be observed or monitored (i.e. supervised) by a teacher and feedback given to the student based on their performance.

The table below provides the commonly used assessment methods that can be used to assesseach of the SLQF learning outcomes.

| **No.** | **SLQF Learning outcomes** | **Assessment methods** |
|---|---|---|
| 1 | Subject / Theoretical Knowledge | Multiple Choice Questions, Structured Essay Questions, Modified Essay Questions, Essay Questions, Short Answer Questions, Assignments, Quizzes |
| 2 | Practical Knowledge and Application | Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OSPE), Logbook, Workplace-based assessments with a portfolio to document the results, Long case, Short case, Oral assessment |
| 3 | Communication | Objective Structured Clinical Examination (OSCE), Short case, Workplace-based assessments with a portfolio to document the results, Observer ratings/gradings of student presentation, Observer ratings/gradings of small group learning activities |
| 4 | Teamwork and Leadership | Workplace-based assessments with a portfolio to document theresults, Observer ratings/gradings of project work, Observer ratings/gradings of small group learning activities |
| 5 | Creativity and Problem Solving | Scenario-based assessment items from assessments given under SLQF learning outcomes 1 and 2 above, Observer ratings/gradings of project (including research) work/reports, Observer ratings/gradings of student presentations, Assignments (even without scenarios, if appropriately worded), Portfolio |
| 6 | Managerial and Entrepreneurship | Observer ratings/gradings of project work, Portfolio, Assignments,Scenario-based assessments given SLQF learning outcomes 1 and 2 above |

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| 7 | Information Usage and Managemen t | Portfolio, Observer ratings/gradings of project/research reports, Assignments, Observer ratings/gradings of the contribution to online forum discussions |
| 8 | Networking and Social Skills | Portfolio, Observer ratings/gradings of project/research work, Workplace-based assessments with a portfolio to document the results especially in the community |
| 9 | Adaptability and Flexibility | Portfolio, Observer ratings/gradings of project/research work, Workplace-based assessments with a portfolio to document the |
| | | results especially in the community |
| 10 | Attitudes, Values and Professionalism | Portfolio, Observer ratings/gradings of project/research reports/work, Workplace-based assessments with a portfolio to document the results, Objective Structured Clinical Examination (OSCE), Short case, Observer ratings/gradings of small group learning activities/student presentations |
| 11 | Vision for Life | Portfolio, Reflective writing assignments, Observer ratings/gradings of project (including elective project) reports |
| 12 | Updating Self / Lifelong Learning | Portfolio, Reflective writing assignments, Observer ratings/gradings of project/research reports |

**Notes:**

1. The above methods are not an exhaustive compilation. Rather, they represent the mostcommonly used for each SLQF learning outcome.

2. These methods convey only the possibility of a method being used. However, it does not mean that any method by default assesses any of the said outcomes, unless purposefully designed to do so. For example, portfolio can be used to assess updating self or lifelong learning. However, if the portfolio does not contain entries that show how the candidate has achieved lifelong learning and/or if those entries are notassessed in terms of lifelong learning, then by merely including a portfolio will not ensure that lifelong learning has been assessed by the portfolio.

3. The above methods carry distinct meanings. Only if these methods are used in line with these meanings that the corresponding learning outcome would be achieved. A glossary of the most commonly used assessment methods is included in Appendix II.

## 7 Performance Standards

This programme shall be delivered at the SLQF level 6. To enable delivery of the program at this SLQF level, the entry qualifications should match the high academic standards, which are maintained throughout the medical degree courses. At present the entry criteria are determined by the University Grants Commission. However, these criteria should be reviewed periodically in consultation with the medical faculties.

As per UGC recommendation, qualified teachers should be available at a teacher-student ratio of 1 to 7 to deliver the curriculum. There should be adequate facilities to expose the students to the different healthcare settings with an adequate patient range and number of patients.

## 8 References

The following documents were referred to when writing the above benchmarkstatements.


- Subject Benchmark Statement in Medicine, Committee of Vice-Chancellors and Directors (CVCD) and University Grants Commission (UGC), 2004., UGC, Sri Lanka
- Sri Lanka Qualifications Framework, 2015, University Grants Commission, Sri Lanka
- Guidelines and Specifications on Standards and Criteria for Accreditation of Medical Schools in Sri Lanka and Courses of Study provided by them, 2011. Sri Lanka Medical Council (SLMC), Sri Lanka
- University Grants Commission (UGC) Circular No. 04/2019, UGC, Sri Lanka
- Basic Medical Education World Federation for Medical Education (WFME) Global Standards for Quality Improvement, 2020, WFME.
- United Kingdom (UK) Subject Benchmark Statement: Medicine, 2002, Quality Assurance Agency for Higher Education, UK.


## 6 Appendices

Members of the Medicine Subject Committee

Glossary of commonly used assessment methods

**APPENDIX I**

**Membership of the Medicine Subject Committee**

| | |
|---|---|
| Prof Jennifer Perera (Chairperson)<br>Senior Professor of Microbiology | University of Colombo |
| Prof Gominda Ponnamperuma (Convenor)<br>Professor in Medical Education | University of Colombo |
| Prof Asiri Abeygunawardena<br>Senior Professor in Paediatrics | University of Peradeniya |
| Prof Vasanthi Arasaratnam<br>Professor of Biochemistry | University of Jaffna |
| Prof Harendra de Silva<br>President, Sri Lanka Medical Council | SLMC Nominee |
| Prof Nilanthi de Silva<br>Senior Professor of Parasitology | University of Kelaniya |
| Prof Priyadarshani Galappatthy,<br>Senior Professor of Pharmacology | University of Colombo |
| Prof Sampath Gunawardena<br>Professor of Physiology | University of Ruhuna |
| Prof Saroj Jayasinghe<br>Professor of Medicine | University of Colombo |
| Prof Kumara Mendis<br>Professor of Family Medicine | University of Kelaniya |
| Prof Lakmini Mudduwa<br>Senior Professor of Pathology | University of Ruhuna |
| Prof Aloka Pathirana<br>Professor of Surgery | University of Sri Jayewardenepura |

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|---|---|
| Prof Shamini Prathapan<br>Professor in Community Medicine | University of Sri Jayewardenepura |
| Prof Thilini Rajapakshe<br>Professor in Psychiatry | University of Peradeniya |
| Dr Sudath Samaraweera<br>Deputy Director General (Acting)<br><br>eEducation, Training & Research<br>Ministry of Health | Director General of Health Services<br><br>Nomine |
| Prof Sisira Siribaddana<br>Senior Professor of Medicine | University of Rajarata |
| Prof Muditha Vidanapathirana<br>Professor of Forensic Medicine | University of Sri Jayewardenepura |
| Prof Vajira Weerasinghe<br>Senior Professor of Physiology | University of Peradeniya |
| Prof Prasantha Wijesinghe<br>Senior Professor of Obstetrics & Gynaecology | University of Kelaniya |
| Prof Surangi Yasawardene<br>Senior Professor of Anatomy | University of Sri Jayewardenepura |

## APPENDIX II
## Glossary of commonly used assessment methods

**Assignments:** These are usually take-home questions/tasks where a candidate constructs a long answer, a model or a physical object using many additional literature resources and additional activities (e.g. generating new information or applying information to an existing model/framework).

**Essay Questions:** These are long answer questions where one open answer may consume around 30 to 60 minutes and several pages of writing. This question type is not frequently used in present-day summative exams as the number of content areas that can be covered withthese questions is limited. Also, marking of the answers can be subjective, even with a well thought out marking scheme.

**Logbook:** See portfolio.

**Long case:** Traditionally, a candidate is allowed to interact with a patient for 30 to 60minutes to take a comprehensive history and carry out a complete physical examination. Based on the information collected by the candidate, a panel of examiners (usually two) orally questions the candidate for another 15 to 20 minutes before awarding, usually, an agreed percentage score, based on the answers that the candidate provided. The questions asked by the examiners range from symptomatology, pathophysiology, investigations tomanagement. Different candidates usually see different patients. However, this examination has now evolved from the above-described traditional format to contain many modifications. These modifications may include examiners observing the candidate during history taking and physical examination, examiners asking standardized questions from every candidate, examiners awarding marks based on a structured marking sheet, examiners awarding independent marks for each candidate.

**Modified Essay Questions (MEQs):** Each question has a case scenario followed by a few (typically 1 or 2) questions. Thereafter, more information on the same case scenario is provided and further few questions are asked. After again providing even further information, further questions can be asked. Different questions usually carry different marks. It may be necessary that the candidates are prevented from returning to the earlier questions, if the further information provides answers to the earlier questions.

**Multiple Choice Questions (MCQs):** Each MCQ has a question (i.e. a lead-in) followed bya number of options from which the candidate has to select the correct or most appropriate answer. The question may or may not be based on a clinical/practical scenario (i.e. a stem). All questions carry the same mark. Though there are many MCQ question formats, the

currently recommended formats in health sciences education are the single best answer and extended matching formats. Guidelines for developing these question formats can be foundat:
https://www.researchgate.net/publication/242759434_Constructing_Written_Test_Questions For_theBasic_and_Clinical_Sciences/link/00463529cfae562759000000/download

**Objective Structured Clinical Examination (OSCE):** This is a clinical examination consisting of several stations (usually around 10 to 15) arranged in a circuit (or carousel). Each station requires the candidate to carry out a discrete short task (i.e. a hands-on activity) lasting around 5 to 15 minutes. All stations (barring rare exceptions) are of the same time duration and a candidate moves from one station to the other after the specified time duration, until he/she completes all the stations. An assessor observes the candidate in each station and scores the candidate ability using a checklist or a series of rating scales. Within a cohort, all candidates go through the same/similar assessment material.

**Objective Structured Practical Examination (OSPE):** Similar to the OSCE, but the assessment material is non-clinical in nature; e.g. laboratory equipment, laboratory readings, specimens of body parts. A variant of this is the slideshow test, where slides with various visual inputs accompanied by one or few short questions are flashed on a screen. A stationery candidate (as opposed to a moving candidate in the OSCE) documents short answer/s to each question on paper or electronically. Later, all questions are marked as in a written examination.

**Oral assessment:** Also known as viva voce, in this assessment, a candidate is traditionally interviewed by a panel of examiners. Based on the answers that the candidate provides for thequestions during the interview an agreed percentage mark is awarded by the examiner panel. However, like the long case and short case, this examination has also undergone modifications. These modifications may include asking pre-identified structured questions, each candidate being asked similar questions and independent marking by each member ofthe examiner panel.

**Portfolio:** A portfolio could be considered as a framework that facilitates collection of assessment material as supportive evidence for the achievement of learning outcomes. The assessment material may comprise the results of other examinations (e.g. workplace-based assessment), work samples from everyday practice (e.g. narratives, feedback from patients/colleagues, photographs, videos, etc.), case reports/discussions, special achievements (e.g. publications, awards), etc. The two distinguishing features of a portfolio from a logbook is that portfolio contains verifiable evidence for the performance of a learning activity (rather than a mere signature of a supervisor, as in the case of the logbook) and always such evidence is accompanied by learner reflection. A portfolio is usually assessed using structured rating form to indicate whether the learner has achieved the specified learning outcomes by the learner.

**Quizzes:** These can be very short answer questions (requiring an answer of one or few words) or MCQs. Questions can be based on various visual and text material. They are usually used for formative purposes either during a teaching and learning activity (e.g. a lecture, tutorial) or posted on the learning management system as pre-tests, continuous assessment and post- tests.

**Observer ratings/gradings:** Either a observer (i.e. an examiner) reads/inspects the work submitted by a candidate or observes a candidate performance and awards ratings based on a structured rating form.

**Reflective writing assignments:** The learner narrates a selected experience and reflects on it; i.e. revisits that experience with a view to learning from it. This revisiting is usually written using a structured format to illustrate the key steps of the process of reflection, based on a prescribed model of reflection. Each reflective writing is marked on a structured rating formor marking sheet.

**Short Answer Questions (SAQs):** These are mini essay questions. For each question, the candidates are required to write a summary answer spanning a few paragraphs. The commonest example of this category of questions is 'Write short notes on…..' type questions.

**Short case:** This examination consists of a brief task such as taking a short history, carrying out a focused physical examination or both. A panel of examiners (usually two) observes and awards an agreed percentage mark. In a short case examination, a candidate tackles four to six short cases, approximately. Usually, different candidates encounter different patients. However, like the long case, this examination has undergone modifications, which may include examiners asking standardized questions from every candidate, examiners awarding marks based on a structured marking sheet, examiners awarding independent marks for each candidate.

**Structured Essay Questions (SEQs):** Each question has typically 3 to 6 sub-parts. These sub-parts may or may not be related to a case scenario given at the beginning of the question. Different sub-parts usually carry different amount of marks. The answers are marked using a structured marking scheme.

**Workplace-based assessment (WPBA):** These are short, observer-based assessments of work samples carried out during day-to-day activities in clinical, laboratory or community settings. The raters, who could be supervisors, teachers, seniors, peers, other healthcare professionals or even patients, score the candidates on structured rating forms. These

ratings are usually collected within a portfolio and typically used for feedback purposes. However, there are instances that a collection of many such rating forms is considered holistically to contribute to summative judgements. Some of the popular workplace-based assessment tools are mini-Clinical Evaluation Exercise (mini-CEX), Direct Observation of Procedural Skills (DOPS), Case-based Discussions (CbD), Multi Source Feedback (MSF) and patient surveys.