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SEAMEO College Module 2: High Officials Country Case Study (HOCCS)

HARMONIZATION IN MEDICAL EDUCATION IN SOUTH EAST ASIAN COUNTRIES



2016

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(R-CDTA 8389: Support for a Regional Platform on Innovations in Education and Human Resource Development towards an Integrated ASEAN Community)

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I. INTRODUCTION

The ASEAN Economic Community.

The ASEAN Economic Community (AEC) Blueprint, which was adopted in November 20, 2007, aimed to transform ASEAN into a single market and production base, a highly competitive economic region, a region of equitable economic development, and a region fully integrated into the global economy.

“The ASEAN Economic Community is the realization of the end-goal of economic integration as outlined in the ASEAN Vision 2020, to create a stable, prosperous and highly competitive ASEAN economic region in which there is a free flow of goods, services, investment and a freer flow of capital, equitable economic development and reduced poverty and socio-economic disparities in year 2020”.

The ASEAN Mutual Recognition Arrangements (MRAs).

Mutual recognition arrangements (MRAs) were established in the following professions:

1. Engineering
2. Nursing
3. Surveying
4. Architecture
5. Accountancy
6. Dentistry
7. Medicine

The objectives of the MRA for medical practitioners include the following:

1. Facilitate mobility of medical practitioners within ASEAN
2. Exchange information and enhance cooperation in respect of mutual recognition of medical practitioners
3. Promote adoption of best practices on standards and qualifications
4. Provide opportunities for capacity building and training of medical practitioners

Mobility of medical practitioners depends on a qualifications recognition process that assesses basic medical education, postgraduate medical education, practice of the profession and continuing professional development. The determination of harmonization of medical education, therefore, is crucial in advancing mobility of medical practitioners.

Platform for the study on harmonization of medical education.

The SEAMEO as the leading organization in education, science and culture cooperation in the region has initiated several projects in support of ASEAN integration and the ASEAN Community 2015. The SEAMEO College is one of SEAMEO's initiatives under the 2011-2020 SEAMEO Strategic Plan that aims to strengthen SEAMEO's capacity to promote education and social development in Southeast Asia and support regional platforms on innovation in education and human resource development towards an integrated ASEAN Community. SEAMEO College consists of a series of forums targeting 4 groups (4 Modules): education ministers, high officials, education leaders, and youth leaders. Module 2 or the High Officials Country Case Study (HOCCS) performs a dual function: (a) to support the Strategic Dialogue for Education Ministers in preparing the SDEM agenda and generating innovative solutions and policy interventions (if required) in implementing the decisions reached by the SDEM; and (b) to deliberate on the inputs provided by the policy research, in-depth case study and other sources and propose innovative solutions and necessary actions and interventions.

The health sector, in particular, the health professionals in higher education in Southeast Asia has received limited attention in terms of student mobility, establishment of a credit transfer system and provision of qualifications standardization/framework. It is within these parameters that Module 2 focuses its theme on mutual recognition and harmonization of higher education in general and in particular, on health professionals in Southeast Asia. To fully achieve one of the main objectives of Module 2 in its aim to harmonize higher education in general, specifically for health professionals, SEAMEO Regional Tropical Medicine and Public Health Network (SEAMEO TROPMED) was tasked by the SEAMEO Secretariat, the Executing Agency for the implementation of the SEAMEO College Project, to lead Module 2.

Module 2 Round 1 Forum was organized last 11-13 March 2015 and was participated by high education officials of the 11 Member Countries of SEAMEO as well as officials of relevant line ministries, officials of health professional regulatory boards, nursing and medical training institutions, international partner institutions of SEAMEO, selected SEAMEO Centres, and officials of SEAMEO Secretariat. A total of 59 participants attended the forum.

The Round 1 forum aimed to:

- Provide a platform for SEAMEO high officials to share and discuss national and regional higher education frameworks with particular focus on nursing and medical professions;
- Identify common areas of cooperation on higher education with particular focus on medical and nursing professions and in support of further development of SEAMEO RIHED's AIMS programme and ASEAN's MRA; and
- Recommend steps to promote greater higher education harmonization and student mobility in SEA with particular focus on medical and nursing professions.

The next steps that were recommended by the Body to move the harmonization process in medical and nursing education within the country and in SEA included:

- Development of a Regional Database for Higher Education, Medical, and Nursing professional education
- Undertake a Comparative Study of Higher Education, Medical and Nursing Professional Education in SEA countries and the harmonization process taking place within the countries.
- Organization of a Regional and National Task Force on Higher Education, Medical and Nursing professions.

Thus, to implement the recommendations of Forum 1 this research was undertaken with the support of the relevant officials of medical and nursing professional education in the 10 ASEAN Member Countries.

The primary goal of the study is to gather, analyze and validate information in the areas of higher education policies, medical education policies, quality assurance framework, regulatory framework, national qualifications framework, credit transfer system, and student mobility in 10 Southeast Asian countries.

Mechanism for student mobility and credit transfer.

There are already established mechanisms for the mobility of students. These are:

1. ASEAN University Network (AUN) involving thirty Higher Education Institutions from the ten ASEAN Member States.
2. University Mobility for Asia and the Pacific (UMAP) has eighteen (18) countries counted as Full Members.

3. ASEAN International Mobility for Students (AIMS) is the flagship program of the Southeast Asian Ministers of Education Organization (SEAMEO), as a platform for education and mobility of students coming from six (6) ASEAN countries and Japan.

The different SEA countries have policies and practices governing student mobility and credit transfer on a national basis. Higher education institutions have established bilateral memorandum of understanding (MOU) and memorandum of agreement (MOA) spelling out the conditions and procedures for students rotating for certain periods in each institution.

Significance and relevance of the study.

Since the ten ASEAN Member States are all signatories to the ASEAN Mutual Recognition Arrangements (MRA), a determination of the presence of standardization, comparability and substantial equivalence of medical education will help the Professional Medical Regulatory Authorities in their process of assessing and recognizing basic medical qualifications possessed by foreign medical practitioners from the region. This study will complement efforts of the ASEAN Joint Coordinating Committee for Medical Practitioners (AJCCM) which is now working on comparability of qualifications of medical professionals and their form of mobility. If curricula and curricular content are comparable, learning outcomes of professionals will also be comparable and that will facilitate the qualifications recognition process which will enhance movement of professionals (MRA).

Student mobility will also be enhanced with the dissemination of important data about medical education in the ASEAN countries. School administrators will acquire a deeper understanding and appreciation of the curricula being implemented by different medical schools in the region.

II. OBJECTIVES

Objectives

The general objective of the study is to identify areas for higher education harmonization in Medicine in 10 Southeast Asian countries.

The specific objectives are:

1. To describe the following:

- a. National Qualifications Frameworks focusing on the qualification levels and descriptors assigned to medical practitioners

- b. Credit transfer system and Student mobility

2. To identify similarities and differences in the curricula of medical schools in terms of:

- a. educational system
- b. curricular approaches and structures
- c. entry requirements
- d. number of years
- e. learning outcomes/competencies
- f. teaching-learning activities
- g. assessment methods
- h. degree conferred

3. To determine presence of standardization/uniformity, comparability or substantial equivalence of medical education in the ten Southeast Asian countries.

III. METHODOLOGY

The research design employed was a case study design with the country as the study unit and that an in-depth analysis was made on the top three schools in countries which had more than 3 medical schools. The study covered the ten Southeast Asian countries, utilizing different data collection approaches and instruments:

1. Emailed self-administered questionnaire

A template was constructed to gather data on medical education, identifying similarities and differences in order to determine presence of harmonization of medical education. Deans of selected medical schools in the region, ASEAN Joint Coordinating Committee for Medical Practitioners (AJCCM) country representatives, officials of national qualifications agencies, Professional Medical Regulatory Authorities (PMRA), and Task Force for the ASEAN Qualifications Reference Framework (AQRF) members were identified and requested to be the resource persons, after which the template for data-gathering were emailed. The variables collected were the following:

- Requirement for entry to medical schools

- Curricula and curricular approaches
- Duration (number of years including internship) and curricular structure
- Learning Outcomes
- Subjects / Modules / Blocks
- Teaching/learning activities
- Assessment Methods
- Degree conferred
- Licensure examinations

2. Key informant interviews

To provide depth to the data being gathered, discussions with officials of higher education agencies, accrediting bodies, regulatory agencies, Deans and administrators of medical schools were conducted. The Key Informant Interviews were aimed at the validation of the data gathered through the self-administered questionnaires, and to provide comprehensive information on the policies set by higher education agencies and their implementation. Key Informant Interviews were conducted in countries with the biggest number of medical schools, namely Malaysia, Indonesia, Thailand, Vietnam and the Philippines.

Information from interviews with officials from higher education agencies, accrediting bodies, regulatory bodies, qualifications agencies focused on:

- Higher Education Policies
- Medical Education Policies
- Quality Assurance and Regulatory Frameworks
- Credit Transfer and Student Mobility
- National Qualifications Frameworks and level assigned to basic medical graduate

3. Review of literature

The review of literature focused on the concept of harmonization, quality assurance, credit transfer, student mobility programs.

4. Proceedings of SEAMEO Module 2 Forum 2

The Module 2 Forum 2 Conference was held in Bangkok on May 10-12, 2016, where representatives from the ten Southeast Asian countries delivered country presentations dealing with higher education agencies and policies, regulatory and quality assurance mechanisms, medical education data, credit transfer, student mobility, national qualifications framework.

IV. RESULTS AND DISCUSSION

The results section is divided into three parts.

Part I is the country case studies which includes description of higher education agencies and policies, medical education policies, QA and regulatory framework, requirement for entry to medical school, curriculum and curricular approaches, duration and curricular structure, learning outcomes, teaching-learning activities, assessment methods, degree conferred and when it is conferred, licensure examinations, professional medical regulatory authority, national qualification framework, qualification level assigned to basic medical qualification, and credit transfer and student mobility.

Part II presents a comparison of the following variables: higher education agencies, accrediting bodies, requirement for entry to medical school, curriculum and curricular approaches, duration and curricular structure, learning outcomes, teaching-learning activities, assessment methods, degree conferred and when it is conferred, licensure examinations, professional medical regulatory authority, national qualification framework, qualification level assigned to basic medical qualification, and credit transfer and student mobility.

Part III presents the different models of the regulatory and quality assurance models being utilized in four countries.

PART I COUNTRY CASE STUDIES

1. BRUNEI DARUSSALAM

1.1 Higher Education Agency and Policies

The Ministry of Education is responsible for crafting policies governing higher education in the country.

1.2 Medical Education Policies

Since Universiti Brunei Darussalam (UBD) is the only university with a medical school, the medical education standards are set by the Senate of the university.

1.3 Quality Assurance and Regulatory Frameworks

The Brunei Darussalam National Accreditation Council (BDNAC) was established in 2011 to act as the quality assurance body, accrediting programmes, qualifications and higher education providers, and implementing the Brunei Qualifications Framework. There is also the Brunei Medical Board (BMB) which regulates the practice of medicine.

1.4 Requirement for entry to medical school

A minimum of 320 'A' Level points for three 'A' Level passes in Biology, Chemistry, Mathematics or Physics; or an Internationally recognized degree of upper second or first class honours in a relevant discipline from Universiti Brunei Darussalam or any other university recognised by the University Senate; or an International Baccalaureate with minimum overall score of 34 points (including a minimum of 6, 6, 5 points in relevant subjects at higher level). Accepted subjects will be assessed on a case by case basis.

1.5 Curricula and curricular approaches

Problem-based learning (PBL) is the central educational approach: students study the curriculum through a series of problem situations or 'scenarios' in small groups, assisted by a facilitator. Each group of students is assigned a base-room for self-study and PBL rooms are furnished with table and chairs, internet access and relevant standard textbooks.

The programme is student-centred, concentrating on learning rather than teaching. Self-directed learning and problem-based learning is used throughout the curriculum. There is vertical integration of the curriculum where basic and clinical sciences are delivered through consecutive modules each year with revisits (spiral curriculum), as well as horizontal integration in which various subjects i.e. anatomy, physiology, pathology, pharmacology, biochemistry, etc. are delivered together through consecutive modules.

The curriculum is divided into **four main curricular themes**. The four themes are:

- **Health Sciences** – consisting of basic and clinical sciences i.e. the sciences underpinning medicine, taught wholly in an integrated manner and in a patient context
- **Patient Care** – the clinical and communication skills and behaviour necessary for a good patient-doctor relationship
- **Our Community** – comprising community and population medicine i.e. the experience of healthcare in the wider community; the population perspective and psychosocial aspects of health and illness (public health, general practice, behavioural sciences)
- **Personal & Professional Development** – covering Islamic Medicine, MIB, research methods, evidence-based medicine, ethical issues, law, audit, teamwork, management skills (including use of IT), lifelong learning

1.6 Duration (number of years including internship) and curricular structure

The duration of the medical course is 6 years. The first three years are spent at the Universiti Brunei Darussalam, and the next three years are spent in Partner Medical Schools (PMS).

In the first year of Bachelor of Health Sciences / Medicine programme, students from all health related programmes enter into the common foundation year. In the second year, the students are channelled into their respective programmes i.e. Medicine. In the third year, successful students are offered either to progress directly into the Partner Medical School (PMS) or they may spend fourth year at UBD and graduate with the BHSc (Hons) prior to progressing to PMS. Students who fail to progress to the PMS to complete the Medicine programme, have the opportunity to graduate with a BHSc (Hons) by doing the fourth year at UBD.

1.7 Learning Outcomes

At the end of the Bachelor of Health Sciences / Medicine programme, graduates should be able to demonstrate that they can meet the following outcomes:

KNOWLEDGE AND UNDERSTANDING

Demonstrate the knowledge and understanding of:

- the basic, clinical, behavioural & social sciences and ethics which are relevant to the practice of medicine
- the principles and practice of public health in both individuals and populations, and the ability to implement appropriate measures, independently and with others
- the current issues in international health and its impact on the national healthcare system, which may, in turn, impact on their own practice
- the principles of research and clinical audit
- the health care system in Brunei Darussalam and the medico-legal issues relating to it
- Brunei Darussalam's National Philosophy of Malay Islamic Monarchy ('Melayu Islam Beraja')
- the Islamic values and principles in the practice of medicine

SKILLS

Be able to:

- communicate clearly, sensitively and effectively with patients and their relatives, with colleagues from relevant multidisciplinary professions and with communities
- impart appropriate, relevant and correct information to their patients, colleagues and communities in a coherent and clear manner
- listen effectively to patients, respond to their communication needs and explore their concerns and expectations
- demonstrate competency in a range of clinical and investigative skills safely, sensitively, independently and with confidence, to a predetermined standard

- demonstrate that they have a logical approach to solving patient problems, from history data, physical examination findings and results of investigations
- critically appraise information extracted from appropriate information from a diverse range of resources, including library and on-line information (internet, intranet, on-line databases), with emphasis on evidence-based or best practices
- recognise and fulfil their obligation to educate patients, colleagues and the communities
- work with members of a multidisciplinary team and understand their own personal roles and responsibilities within the team, as well as those of the other healthcare professionals
- show qualities of organisation, including prioritisation of workload and time management, with a sense of entrepreneurship
- demonstrate that they have strategies for preventing and coping with stress

BEHAVIOUR

Demonstrate that they:

- make the care of their patients their first concern
- accept the moral, ethical and professional responsibilities involved in providing care to individual patients and communities
- respect patients, regardless of their lifestyles, culture, beliefs, religions, race, colour, gender, sexuality, disability, age, and social or economic status.
- respect the right of patients to be fully involved in decisions about their care, including the right to refuse treatment or to refuse to take part in teaching or research
- recognise their own limitations, accept criticism when justified and know when to ask for help
- adopt an empathic and holistic approach to patients and their problems
- are honest and true to themselves and their beliefs
- accept that they have a duty to protect patients and others by taking action if a colleague's health, performance or conduct is putting patients at risk
- behave in a professional manner at all times, by being punctual, reliable, honest, respectful, courteous, and well-presented
- recognise the impact of their own health on their ability to practise medicine, and respond appropriately

- keep themselves up-to-date through self-directed learning and recognise that medical education is a life-long process

1.8 Modules

YEAR 1: COMMON FOUNDATION YEAR (CFY)

Chemistry of Life

Structure and functions of biological molecules

Ultrastructure of the cell

Cellular and nuclear divisions

Control of cell division and differentiation

Inheritance genetics

Glucose, amino acid and fatty acid metabolism

Transport processes in the cell

Immune and inflammatory responses

Bacterial and viral infections

Basic pharmacology

Body Structure and Function

Musculoskeletal system

Nervous system

Respiratory tract

Gastrointestinal tract

Urinary tract

Cardiovascular system

Endocrine system

Special senses (eye)

Reproductive medicine

Year 2 and Year 3

Cardiovascular and Respiratory

Cardio-respiratory system

Cardiology/Cardiovascular Surgery

Respiratory Medicine

Blood and Endocrine

Haematology

Endocrinology

Gastrointestinal and Renal

Nutrition

Alimentary System, including liver

Gastroenterology

Endocrinology
Renal Medicine
Urology
Musculoskeletal and Skin
Musculoskeletal system
Connective tissue
Rheumatology
Orthopaedics
Traumatology
Skin and Dermatology
Brain and Behaviour
Nervous system
Neurology/Neurosurgery
Psychiatry
Psychology
Life Cycle and Genitourinary Medicine
Reproduction and Development
Child Health (Paediatrics)
Obstetrics & Gynaecology
Sexual Health
Ageing
Death

1.9 Teaching/learning activities

Problem based learning (PBL)

Students work in groups of seven or eight on a series of carefully chosen problems. Each group has a facilitator. The groups meet twice a week for three hours at a time and work on one problem per week. The progressive release (New Mexico) style of PBL is used in all years of the programme. Students start a problem in the second hour of the first day, revisit the problem during the second 3-hour tutorial, and finish the problem on the first hour of the next session. There are limited other formal activities on PBL days, so that students are able to use the unscheduled time for independent study. Attendance at PBL is compulsory and is recorded along with students' contribution and quality of participation for each session.

Task based learning

Students work on specific set tasks e.g. achieving expertise in basic life support activities such as basic cardiopulmonary resuscitation.

Portfolio based learning

During year 3 students are asked to keep a record/log/reflective diary of clinically oriented tasks accomplished e.g. designated patients clerked, skills at which they have been observed to be competent, ethical issues discussed, community attachments visited.

Computer assisted learning

Students learn using computers, either by accessing data e.g. key topics or by following interactive learning programmes.

Learning from the Internet and by email

Students can access information (filtered or otherwise) available on the World Wide Web. Students can also email any individual or company for information or for discussion purposes.

Patient Oriented Learning (PtOL)

Students learn from real patients either in the hospital or community health centres and clinics. Some of these are opportunistic while others are structured.

Community placements

Students need to experience a wide range of community attachments e.g. to general practitioners, midwives, health visitors, community psychiatric nurses, community paediatricians, speech and language therapists, occupational therapists, physiotherapists etc. They need to visit (with clear aims and objectives) the many facilities available to patients in the community e.g. patients' homes, playgroups, schools, maternal and child health clinics, community hospitals, community health centres, rural clinics (possibly including flying doctor service), voluntary agencies, complimentary medicine clinics, rehabilitation centres, patient information groups etc

Independent study

Students are encouraged to find and read resources for themselves. They can use books, journals, newspapers, patient information packs, photographs, CDs, the World Wide Web, other computer assisted learning packages – whatever they have access to. They can choose to study all these materials at a time convenient to them. For some this is during the day, for others in the evening, and for others at the weekend. Anatomical

models, a variety of slides and medical images are available for students to examine in the Anatomy Resource Centre.

Expert Forum

An expert turns up at a specified time to answer any questions the students have regarding the topic/problem of the week.

Lectures

There are a maximum of 4 lectures per week. These are interactive wherever possible. They are overviews, explanations of difficult concepts and summaries, but not long lists of detailed facts which can be found in any book. By year 3 the number of lectures is reduced to a maximum of 2.

Large group discussions

Large group discussions are useful for debating. Some of the ethics may be taught in this way, perhaps preceded by video clips. Students may be asked to adopt specific stances and argue their cases as in a balloon debate. Panel discussions could form the basis of large group discussions.

Small group discussions/workshops

Students may have small group teaching outside the PBL tutorials (e.g. critical appraisal workshops). The workshop format would be appropriate using techniques such as brainstorming and snowballing.

Guest lectures

Occasional guest lectures from invited speakers from outside UBD take place.

Observation of clinical practice

Students can learn by observing clinicians dealing with patients. Observation in itself is not enough; students need to reflect on what they have seen so that they can learn from it. As far and soon as possible, students need to practise developing their own skills.

Supervised clinical experience

Students should maximise their experience of working with patients as far as possible. This can be on the wards, in outpatient clinics, or in the community – wherever is appropriate. This is enhanced through feedback from staff about their performance. Such staff can be doctors (all grades), nurses or other healthcare professionals. To ensure this, students are observed whilst carrying out their various assigned tasks.

Multi-professional learning

Students from the healthcare professions need to work together as a team in the workplace. There are opportunities for multi-professional learning within the programme. Learning how to break bad news or discussing ethical issues arising out of everyday dilemmas are areas of the curriculum where there are advantages to shared learning. From August 2009, the first year programme is common to all BHSc students studying for medicine, biomedical sciences, nursing and midwifery.

Team-based learning

Students work in teams from the very start of the course in their PBL groups where they learn about group dynamics, negotiation, tolerance and other interpersonal skills. The importance of teamwork is emphasised in General Practice, in the wards, in outpatient clinics and in the community.

Role play

This teaching technique is ideal for learning communication skills, clinical skills, medical interview, etc.

Presentations

Students make presentations throughout the course. Some are oral, some poster-based, some individual, some in groups, some one-to-one (e.g. to their tutors). Presentation skills will be taught at an early stage in workshop format.

Clinical skills facility

Students can learn basic clinical skills in a safe environment of simulated wards. Clinical skills teachers are available for students to teach and supervise various skills and procedures. High fidelity simulators, models and manikins are available for the practical skills which cannot be practised on each other.

Videotapes and audiotapes

Students can remind themselves of the correct technique for clinical skills (e.g. history-taking and examination) by watching videotapes of the skills being demonstrated by clinicians. They can do this in their own time and can practise on each other. Students can also make videotapes of them

carrying out a consultation or practising breaking bad news so that they can watch it on their own and learn to improve their technique. Students can also make confidential audiotapes of consultations for reflective learning purposes and also for assessment. Videotapes also make useful triggers for discussion.

Using media resources

The media often provides triggers for learning – newspapers reports, recent medical findings and current debates; television and programmes on medical matters abound.

Laboratories and practical work

Throughout the 3 years of the course students learn and carry out relevant practical basic health science skills in dedicated laboratory settings as appropriate.

Anatomy resource centre

A fully dedicated centre to help students in learning gross anatomy, histology and pathology is provided with various models and specimen to facilitate better understanding of the subject.

Inter-Professional education

Introduced in 2012, inter-professional education to our students provides them good insight into the role of different health care providers in achieving quality patient care. Students from different health related programmes learn about each other's profession in a collaborative manner and develop skills in team working.

Community oriented medical education

Starting 2012, Year 3 students are provided with an opportunity to explore various social and non-biological determinants of health in local communities in Special Study Module 3 (SSM3). They will be identifying health related issues and their causative determinants, analysing the problems and suggesting the possible solutions. Students will also learn to implement various solutions with the help of community members, governmental and non-governmental organizations.

1.10 Assessment Methods

Formative and Summative Exams.

The Bachelor of Health Sciences aims to produce clinically competent practitioners with strong problem solving and life-long learning skills. The assessment strategy seeks to support this aim rather than simply producing students whose objective is to pass assessments. It is acknowledged that assessment will always be a key feature in driving learning and assessments are integrated into the curriculum such that they foster and support the problem based learning approach that is fundamental to the programme.

PBL encourages the acquisition of knowledge and the development of problem solving skills through teamwork and self-directed learning. The assessment framework supports PBL by facilitating understanding and encouragement, through giving guidance on the adequacy of progress and by the provision of feedback on areas requiring further work

A Module and Themes Assessment Team (MTAT) has been set up to oversee the assessment process. Membership includes the Programme Leader, year coordinators the theme leaders and module leaders. The MTAT is responsible for setting questions, reviewing papers, collating results and reviewing student progress.

Internationally recognised standard setting procedures (the modified Angoff procedure) is used to set the pass mark for each piece of assessment.

International standards are also upheld through the appointment of an external examiner who regularly visits to scrutinise the examination procedures in the PAPRSB Institute of Health Sciences.

Formative Assessment

Although formative assessment is not currently used to determine progression, it will be used to give both students and their tutors information about their progress and performance.

Sessions will be held where students will be able to look at model answers from these assessments compared to their own answers, so that they may identify gaps in their knowledge, and have a greater understanding of where they might have gone wrong.

Summative Assessment

Summative assessment is used to determine competency to progress through the course.

The course is assessed by means of written examinations, clinical examinations and continual assessment. Assessment will be blueprinted against specific learning objectives; appropriate methods for testing each objective are selected.

Written Assessment

Written assessments should relate to a doctor's pattern of thinking. Reasoning and application of knowledge is mainly tested together with some recall of information.

A variety of written examination types are used during the course, including:

- **Short Answer Questions (SAQs)** where students give a short written response to a series of questions under one theme.
- **Multiple Choice Questions (MCQs)** where, in response to a short question or statement, students select the single best answer from a range of given possible responses.
- **Extended Matching Questions (EMQs)** where, after reading a short introduction on a topic such as 'back pain', students respond to questions or statements by selecting one or more items from a long list.

Skills-based Assessment

Clinical skills, communication skills and attitudes are tested by OSCE or similar skills-based assessment and by observation of actual performance (possibly using video). Examples of skills-based assessments include:

- perform a resuscitation or procedure on a dummy
- take a history from a standardized patient
- carry out physical examination on a standardized patient
- demonstrate the use of an inhaler
- demonstrate how to fill in a drug chart
- measure blood pressure, pulse, height, weight and BMI
- explain results to a patient
- interpret X-rays, ECGs, CT scans etc.
- give an oral presentation

1.11 Degree conferred

Degree conferred by UBD after 3 pre-clinical years. After 3 years the **MBBS degree or MD degree** will be awarded by the Partner Medical Schools.

Degree of Bachelor of Health Sciences (Ordinary) as specified in Regulation 9, a student shall have been awarded all modular credits for all years of the programme.

Degree of Bachelor of Health Sciences (Honours) as specified in Regulation 10, a student shall have been awarded all modular credits for all years of the programme.

The grading system prescribed by the Regulations governing the Classification of Degrees applies to the classification of the Bachelor of Health Science (Honours) degree as laid out in the table below.

Classification

First Class Honours

Second Class Honours (Upper Division)

Second Class Honours (Lower Division)

Third Class Honours

Pass Degree

1.12 Licensure examinations

There is no national licensure examination.

1.13 Professional Medical Regulatory Authority

The Medical Practitioners and Dentists Act (1957) created the Brunei Medical Board which maintains a register of all registered medical practitioners and dentists in Brunei Darussalam. The main functions of the Board include:

- Registration of Medical Practitioners and Dentists
- Maintaining register
- Recognition of medical and dental qualifications

- Investigating complaints about practitioners with reference to fitness to practice

1.14 Qualifications Levels of Basic Medical Education Degree

Graduates of basic medical education with the degree of MBBS or MD are assigned Level 6 qualifications in the Brunei Qualifications Framework.

1.15 Credit Transfer System and Student Mobility

Since there is only one medical school, there is no credit transfer and mobility among medical students within the country, and even on a regional basis. Medical students of UBD transfer to Partner Medical Schools for their final three years of medical education, as an integral part of their medical education, and not as short rotations in other foreign medical schools.

2. CAMBODIA

2.1 Higher Education Agency and Policies

The policy-making body for higher education is the Ministry of Education Youth and Sports. Under it are 59 private HEIs and 12 public HEIs. It has the Department of higher Education that regulates the higher education institutions. One distinguishing feature in Cambodia is the presence of 14 other ministries and institutions which have set up their own higher education institutions.

2.2 Medical Education Policies

Ministry of Health is responsible for ensuring curriculum competency and health human resource policy. There are five medical schools, namely, the University of Health Sciences (Public), Institute of Health Sciences of the Cambodian Royal Armed Forces, Norton University (Private), University Puthisastra (Private), International University (Private).

2.3 Quality Assurance and Regulatory Frameworks

The accrediting body is the Accreditation Council of Cambodia (ACC). There are only five (5) medical schools in the country. Two are government owned while three are private schools.

2.4 Requirement for entry to medical school

Primary requirement is graduation from senior high school.

2.5 Curricula and curricular approaches

At the present time, the curriculum is discipline-based but moving toward competency-based curricular approach.

2.6 Duration (number of years including internship) and curricular structure

The curriculum is divided into three cycles

Cycle 1: Certificate of basic medical science: Year 1 (foundation), Year 2 and Year 3

Cycle 2: Bachelor of Medicine: Year 4, Year 5, Year 6

These two cycles form the Basic medical program

Cycle 3: Clinical program. Students can go into either of the two pathways:

Medical doctor (MD/GP) Year 7 and Year 8 (Internship)

Medical specialist (DES) Year 7, Year 8, Year 9 and Year 10

2.7 Learning Outcomes

The following learning outcomes were specified:

- To appropriately apply the general medicine's knowledge and skills in the treatment, rehabilitation both physical and mental health at Primary Health Care and referral levels
- To pay more attention to vulnerable group such as women, children and disable people
- To manage emerging diseases and natural disasters
- To provide health education and prevention to community
- To show a positive attitude and respect for people regardless of economic status, customs and beliefs
- To work competently as a team with other health professionals within the appropriate structures, policy and codes of conduct of the Ministry of Health
- To conduct related health research in order to contribute to the improvement of the community health status

2.8 Subjects / Modules / Blocks

General education subjects, Basic Sciences and Clinical sciences subjects sequenced from Year 1 to Year 8.

2.9 Teaching/learning activities

Large group teaching and learning is the main activity utilized in the medical schools.

2.10 Assessment Methods

Knowledge assessment: MCQ Computerized

Skills: OSCE

2.11 Degree conferred

At the end of year 3, year 6, and year 8, the following degrees are conferred:

Certificate of basic medical science (Year 3)

Bachelor of Medicine (Year 6)

Medical Doctor (Year 8)

2.12 Licensure examination

There is no licensure exam.

All medical students are required to go through national exit exam. Those who pass the national exit exam are graduates as medical doctors and can apply for registration at the medical council and then can practice.

2.13 Professional Medical Regulatory Authority

The Cambodian Medical Council regulates the practice of medicine in the country.

2.14 Qualifications Levels of Basic Medical Education Degree

Graduates of the Year 6, with Bachelor of Medicine degree are assigned Level 6, while those who finished Year 8 of the medical education program, with

2.15 Credit Transfer System and Student Mobility

There is no functioning credit transfer system.

3. INDONESIA

3.1 Higher Education Agency and Policies

Higher education is being regulated by the Ministry of Research, Technology and Higher Education. Academic programs are approved by the Ministry of Higher Education (MOHE).

The legal basis is found in the Law of the Republic of Indonesia Number 12 Year 2012 on HIGHER EDUCATION, known as the Higher Education Act 2012. In this Act, the functions and objectives of higher education were defined:

Functions:

- a. To develop capacity and build character and civilization of the dignified nation in developing the intellectual life of the nation;
- b. To develop innovative, responsive, creative, skilled, competitive and cooperative academic civitas by implementing Tridharma; and
- c. To develop science and technology by taking into account and applying the value of the Humanities.

3.2 Medical Education Policies

The policies and standards are set mainly by the Ministry of Higher Education (MOHE) but with the participation of the Ministry of Health and Indonesia Medical Council. There have been a number of issuances that include the following:

- UU No. 20, 2013 Medical Education
- Ministerial Decree: National HE Standards
- Ministerial Decree: Quality Assurance System
- Ministerial Decree: Accreditation
- Ministerial Decree: Competence Certificate
- DGHE Decree: Student Quota

3.3 Quality Assurance and Regulatory Frameworks

The main regulatory body for medical schools is the Ministry of Higher Education (MOHE). It issues and cancels licenses on higher education institutions. In cooperation with the Indonesia Medical Council, high standards are maintained as part of the requirements for the recognition of medical schools.

The accrediting body is the Indonesian Accreditation Agency for Higher Education in Health (IAAHEH/LAM---PTKes). It covers exclusively the health professions programs. Its establishment was intended to answer the needs for reforms in higher education in health. The Ministries of Education, Health and Planning through Health Profession Education Quality (HPEQ) wanted to strengthen accreditation of higher education in health to be accomplished by IAAHEH. It has defined its vision, mission and goals. It has 15 members with one representative from civil society. It has finalized the criteria, standards and process for accreditation. Accreditation by IAAHEH is mandatory. Since it started in 2015, it has already accredited around 32 of the 75 medical schools.

3.4 Requirement for entry to medical school

The main requirement is graduation from Senior High School (K12), from Science Track.

3.5 Curricula and curricular approaches

There is a mix of curricular approaches being utilized by medical schools, among which are integrated, organ system-based and theme-based problem-based learning and competency-based.

3.6 Duration (number of years including internship) and curricular structure

Duration is 6 years, structured by having 4 years basic sciences, and 2 years clinical sciences, including one year of internship.

3.7 Learning Outcomes

The learning outcomes comply with the Indonesian Qualifications Framework. The academic (bachelor) phase is equal to IQF outcome level 6 and the professional (clinical) phase is equal to IQF outcome level 7.

Learning Outcomes:

- a. to know the principles of and perform an effective communication with patient, family, community, and other health professionals

- b. to perform essential basic clinical skills at the primary health care settings
- c. to apply basic biomedical, clinical, behavioral sciences and epidemiology in dealing with health problems.
- d. to have a scientific background in managing professionally common health problems at individual, family and community level in a comprehensive, holistic, and continuous manner within the primary health care (PHC) settings
- e. to be ethical, moral & religious professional
- f. to access, critically appraise and manage medical and health information to maintain his/her lifelong learning capacity
- g. to conduct medical/health research
- h. to have capability in pursuing further academic or professional education.

3.8 Subjects / Modules / Blocks

1st Year: Fundamentals of Biomedical Sciences (FBS I-IV), Block of Reproductive System, integrated with Clinical Skills Program (CSP) I-II, Bioethics and Humanity Program (BHP) I-II, Community Health Oriented Program (CHOP) I-II, and Community Research Program (CRP) I-II.

2nd Year: Block of Endocrine and Metabolic System, Block of Neurobehavior System, Block of Dermatomusculoskeletal, Block of Hematoimmunology, integrated with CSP III-IV, BHP III-IV, CHOP III-IV, and CRP III-IV.

3rd Year: Block of Cardiovascular System, Block of Respiratory System, Block of Genitourinary System, Block of Gastrointestinal System, integrated with CSP V-VI, BHP V-VI, CHOP V-VI, and CRP V-VI.

7th Semester: Block of Tropical Medicine and Block of Family Medicine, integrated with CSP VII, BHP VII, CHOP VII and CRP VII.

3 semester Clinical and Community Rotations: 44 weeks (all major/core)

Surgery: 9 weeks (5 scu)

Internal Medicine: 9 weeks (5 scu)

Pediatrics: 9 weeks (5 scu)

Obstetrics and Gynecology: 9 weeks (5 scu)

Anesthesiology and Reanimation: 3 weeks (2 scu)

Otorhinolaryngology: 3 weeks (2 scu)

Ophthalmology: 3 weeks (2 scu)
Psychiatry: 3 weeks (2 scu)
Dentistry and Oral Medicine: 1 week (1 scu)
Dermatovenereology: 3 weeks (2 scu)
Forensic Medicine: 3 weeks (2 scu)
Neurology: 3 weeks (2 scu)
Radiology: 3 weeks (2 scu)
Nuclear Medicine: 1 week (1 scu)
Rehabilitation and Physical Medicine: 1 week (1 scu)
Community Medicine: 9 weeks (5 scu)

3.9 Teaching/learning activities

Schools which have adopted the integrated, organ-system based curricular approach use mainly small group discussion as the predominant teaching-learning activity.

3.10 Assessment Methods

Mix of formative and summative assessments, utilizing the following:

- Cognitive domain: Written exams (MCQ, Structured short answer, Essay), Oral Exams
- Psychomotor domain: Direct observation, rating scales, OSPE, Review of logbooks
- Affective domain: Direct Observation, Checklists, Rating Scales
- Communication skills: Direct observation, rating scales
- Interpersonal skills / Teamwork: Direct observation, Rating Scales

3.11 Degree conferred

- S.Ked. (Sarjana Kedokteran/Bachelor in Medicine), after fulfillment of all requirement during 3.5 year bachelor phase
- dr. (Dokter/ MD, Doctor of Medicine degree), after fulfillment of 1.5 year professional phase, including pass the national board exam as exit exam

3.12 Licensure examinations

The committee administering national competency exam is assembled by the MOHE, cooperating with the Association of Medical Schools (AIPKI)

and Medical Professional Organization (IDI). Indonesian Medical Council acts as member of the committee board.

The exam composed of both computer-based exam using MCQs and OSCE, administered at the end of the study. Student must pass both exams before granted the completion degree from medical school (Dokter). At the same time the examination is also for awarding Certification of Competence from the College of Medicine (the authoritative body for certification of competence of doctor/GP which is part of IDI). The Indonesian Medical Council assesses both the validity of the certificate of medical degree and certificate of competence then issues the license to practice medicine in the form of letter of registration.

3.13 Professional Medical Regulatory Authority

The Indonesian Medical Council is the professional medical regulatory authority. Its membership includes three lay persons. It is an independent and autonomous State Body directly under the President of the Republic of Indonesia created under the Medical Practice LAW/2004.

The primary roles are:

1. Registration of Medical Professional (for Licensing)
2. Recognize and Approval of Medical Education Standard
3. Monitoring and Evaluation of the Implementation in Medical Practice in Collaboration with other stake holders

Members of the Indonesian Medical Council and Ministry of Health represent the profession of medicine in the ASEAN MRA meetings, through membership in the ASEAN Joint Coordinating Committee for Medical Practitioners (AJCCM).

3.14 Qualifications Levels of Basic Medical Education Degree

The Indonesian Qualifications Framework is a nine-level qualifications framework. Graduates of medicine are assigned to level 7: Professional. After finishing a Master in any branch of medicine, they are assigned to Level 8, which includes specialists and subspecialists. Level 9 is reserved for the academic track with attainment of doctoral and postdoctoral degrees. The Ministry of Higher Education implements the Indonesian Qualifications framework. It also conducts recognition of prior learning.

3.15 Credit Transfer System and Student Mobility

The Higher Education Act of 2012 contains the following provisions:

Paragraph 4

Transfer and Equivalence

Section 38

(1) The transfer of Students may be between:

- a. Study Programs in the same education program;
- b. Types of higher education; and/or
- c. Tertiary Education Institutions.

(2) Provisions on transfer of Students as referred to in subsection shall be set out in a

Ministerial Regulation.

Section 39

(1) Graduates from vocational education or from professional education may continue their

education to academic education through equivalence.

(2) Graduates from academic education may continue their education to vocational education or professional education through equivalence.

(3) Provisions on equivalence of graduates from vocational or professional education as referred to in subsection (1) and equivalence of graduates from academic education as referred to in subsection (2) shall be set out in a Ministerial Regulation.

Section 40

(1) Graduates from foreign tertiary education institutions may attend higher education in Indonesia through equivalence.

(2) Provisions on equivalence of graduates from foreign tertiary education institutions as referred to in subsection (1) shall be set out in a Ministerial Regulation.

Credit transfer and student mobility among the medical schools in Indonesia is limited, and even on a regional basis. The mobility involving international universities is higher because of bilateral MOUs and MOAs. Credit transfer and mobility is an initiative of higher education institutions, not MOHE. With AIMS, 21 credits per semester may be obtained, but only 75% is recognized when students go back to their own school.

4. LAO PDR

4.1 Higher Education Agency and Policies

All medical schools and colleges are under the control and regulation of the Department of Training and Research (DTR), Ministry of Health. DTR is responsible for policy/strategies, regulations, number of student intake, budget, etc.

4.2 Medical Education Policies

There is only one medical school in Lao PDR, the Faculty of Medicine, University of Health Sciences, under the Ministry of Health (MOH). Policies governing the medical school emanate from the MOH. The standards of all curriculum have developed own core competencies and based on the Ministry's Decree and regulated by the body in charge of Ministry of Health and Ministry of Education and Sports.

4.3 Quality Assurance and Regulatory Frameworks

At the national level, the Ministry of Education had Bureau of Quality Assurance that regulates all educational institutes including private schools. At the institute level, there is regulation on Quality Assurance Standard. The University of Health Sciences (UHS) had its own Standard on Quality Assurance at Program level.

In recent years, UHS and Lao National University have been involved in the ASEAN Universities Network for Quality Assurance at Programme level. Many workshops were organised in order to adopt the same system in ASEAN countries. External evaluation on selected programs are scheduled to start in 2016 as a pilot study.

4.4 Requirement for entry to medical school

The applicants should have completed high school (12 years of education) or equivalent.

4.5 Curricula and curricular approaches

The UHS adopted Integrated curriculum (Organ-system and Problem-based) since 2002 with assistance from Faculty of Medicine, University of Calgary Canada.

4.6 Duration (number of years including internship) and curricular structure

Six years of medical school divided into:

- Pre-clinical years: 1st, 2nd and first semester of 3rd year
- Clinical Years: second semester of 3rd year, 4th year, 5th year and 6th year hospital and community-based

Total number of credits: 228 (as recommended by National standard)

4.7 Learning Outcomes

- Apply modern and appropriate medical approaches and techniques for the diagnosis and treatment of common diseases and emergency care.
- Know the signal and symptoms of diseases that affects the Lao community including the process of a differential diagnosis.
- Take the history and a complete physical examination of patients
- Write a clear and exact oral and written presentation of the sick patients
- Provide health promotion and physical and mental health rehabilitation.
- Undertake management of health services at all levels
- Contribute to clinical and public health research in their area of work.
- Communicate effectively with patients and community
- Exhibit professional and ethical behaviour
- Demonstrate capacity for continuing lifelong learning

4.8 Subjects / Modules / Blocks

General education, basic and clinical sciences subjects, and clinical rotations.

4.9 Teaching/learning activities

Main activities used in T-L include lectures, small group discussions, laboratory work, clinical rotations in hospital and field practice in the community.

4.10 Assessment Methods

The assessment methods that have been in use in the University of Health Sciences are, based on Domains/Competencies:

- Cognitive domain: Written exams (MCQ, Structured short answer, Essay), Oral Exams
- Psychomotor domain: Direct observation, rating scales, OSPE, Review of logbooks
- Affective domain: Direct Observation, Checklists, Rating Scales, Critical Incident, Reports
- Communication skills: Direct observation, rating scales, review of records / logbooks, review of Charts
- Interpersonal skills / Teamwork: Direct observation, Rating Scales

4.11 Degree conferred

The UHS confers the degree of MD (Doctor of Medicine) The degree is conferred at the end of 6th year (graduation from medical school). This is the pre-requisite for taking the national exam for initial licensing.

4.12 Licensure examinations

There is no national licensure examination for medical graduates in Lao PDR.

4.13 Professional Medical Regulatory Authority

The Ministry of Health acts as the professional regulatory body, with responsibilities of registering and licensing of medical professionals.

4.14 Qualifications Levels of Basic Medical Education Degree

The National Qualifications Framework: (NQF) of Lao PDR was developed and based on Australia, ASEAN Qualifications Reference Framework. The Higher Education Qualification are certification of success in each level of high education.

Each qualifications framework of degree are described in 4 domains such as:

Knowledge domain,
Skills domain,
Application domain of knowledge and skills
Social skills domain

1.15 Credit Transfer System and Student Mobility

Credit transfer and student mobility has not been introduced yet.

5. MALAYSIA

5.1 Higher Education Agency and Policies

The Ministry of Education (MOE) is the government agency regulating higher education. However, in March 27, 2004, the Ministry of Higher Education (MOHE) was established to make Malaysia a center of higher education excellence by the year 2020.

Higher education in Malaysia is governed by several laws, which include the following:

1. The Education Act 1996 (Act 550)
2. Malaysian Qualifications Agency Act 2007 (replacing the previous National Accreditation Board Act 1996 which has been repealed)
3. Medical Act 1971

5.2 Medical Education Policies

The following agencies are all involved in setting policies, and regulation of medical schools, through the formulation of standards, and conduct of site visits and inspections.

- Ministry of Higher Education

- Malaysian Medical Council
- Malaysian Qualifications Agency
- Ministry of Health

5.3 Quality Assurance and Regulatory Frameworks

The Joint Technical Committee is composed of representatives from government agencies, namely:

1. Two representatives from the Malaysian Medical Council, with the President acting as Chair of the Committee
2. Two representatives from the Ministry of Higher Education
3. Two representatives from the Ministry of Health
4. One representative from the Malaysian Qualifications Agency
5. One representative from the Public Services Department

The Joint Technical Committee is responsible for:

1. the accreditation process and course approval in both private and public medical schools
2. constituting the evaluation panel, studying the report of the accrediting team and submitting the recommendations on accreditation for ratification by the relevant Accrediting Authorities
3. reviewing the validity of the standards and procedures from time to time and to submit proposals for changes to the respective accrediting authorities

New Course Approval

The Technical Committee conducts the site visit and assesses the readiness and capacity of the school to conduct and sustain a medical course. Based on the recommendations of the Technical Committee, an application to conduct a medical programme may be approved unconditionally, approved with conditions or rejected by the Minister of Education

5.4 Requirement for entry to medical school

The main requirement is graduation from senior high school.

5.5 Curricula and curricular approaches

An integrated, organ system-based curriculum is being used and implemented.

5.6 Duration (number of years including internship) and curricular structure

Five years of medical school divided into:

- Pre-clinical years: 1st and 2nd year
- Clinical years: 3rd, 4th and 5th years, with an 8 weeks of pre-internship
- Compulsory housemanship for 2 years in government hospital

5.7 Learning Outcomes

At the end of 5 years, students shall be able to:

- interpret medical knowledge, concepts and principles in a safe, effective and evidence-based manner. [PO1 Knowledge]
- demonstrate appropriate competent practical and clinical skills in diagnosis and patient management. [P02 Practical Skills]
- engage patients and their families in making health related decisions using suitable social skills with empathy, respect and sensitivity. [P03 Social Skills and Responsibility]
- model professional values, attitudes and ethical behaviour in medical practice. [P04 Values, Attitudes and Professionalism]
- communicate effectively with patients, family, colleagues and the broader community either as a collaborative team member or a leader. [P05 Communication, Leadership and Team Skills]
- critically evaluate current knowledge and technology to solve healthcare/medical problems in a creative scientific manner. [P06 Problem Solving and Scientific Skills]
- integrate medical informatics efficiently to engage in lifelong learning and continuing professional development. [P07 Information Management & Lifelong Learning Skills]
- develop community public health programmes using resources and entrepreneurial skills to enhance population health. [P08 Managerial and Entrepreneurial Skills]

NOTE: Program Outcomes are dictated by MMC and MQA

5.8 Subjects / Modules / Blocks

Modules and blocks are arranged according to the different organ systems, with integration of basic sciences and clinical sciences.

5.9 Teaching/learning activities

Small group discussion was adopted as main teaching-learning activity.

5.10 Assessment Methods

Formative and summative evaluation is regularly conducted in the pre-clinical and clinical stages, with a variety of evaluation methods. These include:

- Written examinations, both multiple choice questions (MCQ) and extended matching questions (EMQ)
- Structured clinical exercises
- Workshop and small group session attendance
- Submission of assignments
- Objective structured clinical examination (OSCE)
- Logbook submission
- Completion of procedural skills
- Case presentation

5.11 Degree conferred

At the end of the medical course, MBBS is conferred.

5.12 Licensure examinations

There is no national licensure examination in Malaysia.

5.13 Professional Medical Regulatory Authority

The Malaysian Medical Council (MMC) is a body corporate established under the provisions of section 3(1) of the Medical Act 1971 whilst the legal powers are derived from section 4 of the same Act.

The Council is a supreme body and vested with the authority to make all policy decisions. Though Para 2(1) of the First Schedule, under the Medical Act 1971 requires the Council to meet at least twice in a year, however, meetings are held on the second Tuesday of every month to enhance efficiency. The

Council meetings are presided over by the President and in his absence by a chairman elected by members present.

The Council acts through various Committees and Secretariat.

The principal aim of the MMC is to ensure the highest standards of medical ethics, education and practice, in the interest of patients, public and the profession through the fair and effective administration of the Medical Act.

Primary roles:

1. In medical education: has two representatives to the Technical Committee, with the President of the MMC acting as Chair
2. In medical practice: regulation of medical practice

5.14 Qualifications Levels of Basic Medical Education Degree

Graduates of basic medical education with degree of MBBS are assigned to Level 6 of the Malaysian Qualifications Framework. Those who obtain Masters degree in the specialties of medicine are assigned to Level 7, with the title of specialists and subspecialists.

The Malaysian Qualifications Agency has not decided to assign subspecialists to Level 8.

5.15 Credit Transfer System and Student Mobility

A. Guidelines on Credit Transfer, on a national basis

The objective of this guideline is to provide guidance regarding the management of transfer student from one institution to other institution.

Condition(s) to be fulfilled for credit transfer:

- a) if the student is still enrolled in current university; and
- b) only between recognized universities listed in the Second Schedule of the Medical Act 1971; and
- c) from provisionally accredited Malaysian Medical schools can apply for credit transfer to fully accredited Malaysian Medical schools. Provisional Accredited Malaysian Medical schools are not allowed to accept student for credit transfer; and
- d) must fulfill the minimum criteria and qualifications for entry into a medical programme; and

e) if the curricular content between the receiving and the original institutions is MORE THAN 80% similar, exemption is allowed to a MAXIMUM of 40% from overall duration of study; and

f) if the curricular content between the receiving and the original institutions is 100% similar, lateral transfer is allowed provided candidate spend at least 2 years at the graduating institution

B. Within Malaysia and among the medical schools, there is difficulty in lateral transfer of students.

C. On a regional basis (among the ten ASEAN countries), there is very limited mobility among medical students, even with the presence of student mobility programs like AUN, UMAP and AIMS. Malaysian universities which are members of the ASEAN University Network (AUN) include the following:

1. University of Malaya
2. Universiti Kebangsaan Malaysia
3. Univeristi Putra Malaysia
4. Universiti Sains Malaysia
5. Universiti Utara Malaysia

D. On an international basis, there is more student mobility even among medical students, and this is a two-way mobility. This is due to the presence of MOUs with foreign international universities. The mobility involves the clinical rotations in selected departments, depending on the interest of the medical students. There is limited mobility at the level of the pre-clinical years.

E. The UKM medical programme submitted its student mobility programme.

Outbound students have successfully completed credits at medical schools in Europe, Thailand and Japan.

6. MYANMAR

6.1 Higher Education Agency and Policies

There are 169 higher education institutions in the country which fall under the authority of 12 Ministries. The biggest number of HEIs are under the

Ministry of Education and the Ministry of Science and Technology. The National Education Law (enacted by the Pyidaungsu Hluttaw on September 30, 2015) governs basic and higher education.

6.2 Medical Education Policies

Medical education policies, standards are set by the Department of Health Professional Resource Development and Management, Ministry of Health. The National Health Policy 1993 (Human resource and Health

services) and National Health Plan (2011-12 to 2015-16) direct the planning and training of human resources for health as required according to types of health care services. It was aimed to maintain the balance and harmony between production and utilization, to administratively oversee the five medical universities in terms of human resources, academic matters and infrastructure, and to ensure that curricula including assessment is the same and uniform across the five medical universities. Academic matters cover both undergraduate and postgraduate issues.

6.3 Quality Assurance and Regulatory Frameworks

The Quality Management System of Myanmar is being developed following the ASEAN University Network (AUN) QA guidelines. The National Education Standard and Quality Assurance Committee has been created.

6.4 Requirement for entry to medical school

The entry requirement is graduation from 11th Grade of Senior High School.

6.5 Curricula and curricular approaches

Discipline based traditional curriculum.

6.6 Duration (number of years including internship) and curricular structure

Total duration: 7 years

Preclinical

1st M.B.B.S: 1 year(Foundation)

2nd M.B.B.S: 1 ½ year

Para-clinical

3rd M.B.B.S: 1 year

Final Part-1: 1 year

Clinical

Final Part-2: 1 ½ year

Internship: 1 year

6.7 Learning Outcomes

Institutional objectives, departmental objectives, Specific Learning Objectives are used.

6.8 Subjects / Modules / Blocks

6.9 Teaching/learning activities

1. Large group teaching (lecture)
2. Small group discussion (SGD)
3. Practical
4. Bed side teaching
5. Clinical skill Laboratory teaching

- All Teaching/ Learning activities are considered as main activity

6. 10 Assessment Methods

Assessment Methods are based on Educational Domains

For the subjects taught in pre and para-clinical years

- Knowledge and attitude: Paper based MCQ and MSQ
- Skill and attitude: OSPE and Viva Voce:

For the subjects taught in clinical year:

- Knowledge and attitude: Paper based MCQ and MSQ
- Clinical Skill and attitude: OSCE and Viva Voce

6.11 Degree conferred

The degree conferred is MBBS.

6.12 Licensure examinations

There is no national licensure examination. The different universities administer examinations each and every academic year, carried out by University Examination Board which is headed by Rector of the medical university concerned.

- After Internship training, only students who obtained satisfactory remarks from Heads of the Department of clinical subjects are eligible to be conferred the degree

6.13 Professional Medical Regulatory Authority

The Myanmar Medical Council is the professional medical regulatory authority, which regulates the practice of the profession. It recognizes the degree conferred by the different universities.

6.14 Qualifications Levels of Basic Medical Education Degree

In the proposed Myanmar Qualifications Framework, the Bachelor's degree is assigned to Level 6.

6.15 Credit Transfer System and Student Mobility

Regarding student mobility within the country, students are allowed to transfer schools if reason is valid. The curriculum being followed is being made uniform for the medical universities. From 2017-18 academic year, semester based program structure, credit system and GPA will be used. These moves will result in student mobility.

7. PHILIPPINES

7.1 Higher Education Agency and Policies

Republic Act 7722 Higher Education Act of 1994 created the Commission on Higher Education with the following main powers and responsibilities:

- set minimum standards for programs and institutions of higher learning recommended by panels of experts in the field and subject to public hearing, and enforce the same;
- monitor and evaluate the performance of programs and institutions of higher learning for appropriate incentives as well as the imposition of sanctions such as, but not limited to, diminution or withdrawal of subsidy, recommendation on the downgrading or

withdrawal of accreditation, program termination or school closure;

- identify, support and develop potential centers of excellence in program areas needed for the development of world-class scholarship, nation building and national development;

7.2 Medical Education Policies

The Commission shall reconstitute and/or organize technical panels for different disciplines/program areas. They shall assist the Commission in setting standards and in program and institution monitoring and evaluation. The technical panels shall be composed of senior specialists or academicians to be appointed by the Commission.

There is a Technical Panel for the Health Professions and Technical Committee on Medical Education which submits recommendations to the Commission Proper for approval. The Policies, Standards and Guidelines (PSG) for the Doctor of Medicine program is crafted by the TCME, with final approval by the CHED Commission.

7.3 Quality Assurance and Regulatory Frameworks

The accrediting body for medical schools is the Philippine Accrediting Association for Schools, Colleges and Universities (PAASCU), a private organization which was established by 11 Catholic schools in 1957. It covers different levels of educational institutions and academic programs belonging to elementary, secondary, and tertiary sectors. In 2000, medical schools were included. External accreditation by PAASCU is voluntary. It has defined criteria, standards, and procedures. It also has levels of accreditation. It is certified by the United States Department of Education National Committee for Medical School Accreditation (NCFMEA). As of May 1, 2016, there are 14 medical schools which have obtained external accreditation from PAASCU, with accreditation levels I-IV. The accreditation system is voluntary, with incentives given by CHED depending on the level attained.

7.4 Requirement for entry to medical school

The entry requirement is a baccalaureate degree, which usually consist of 4-year degree programs.

7.5 Curricula and curricular approaches

Philippine medical schools utilize a variety of curricula and curricular approaches. Many schools still use the traditional, discipline-based curriculum, but many schools now have been implementing the organ system-based curriculum. A number also implement problem-based learning (PBL) approach.

7.6 Duration (number of years including internship) and curricular structure

Majority of medical schools: 5 years

1st and 2nd years: pre-clinical

3rd-5th years: clinical (includes one year of internship)

7.7 Learning Outcomes

Ten learning outcomes adopted from the PSG for medicine prescribed by the Commission on Higher Education (CHED).

1. Demonstrate clinical competence
2. Communicate effectively
3. Lead and manage health care teams
4. Engage in research activities
5. Collaborate with interprofessional teams
6. Utilize systems-based approach to healthcare
7. Engage in continuing personal and professional development
8. Adhere to ethical, professional and legal standards
9. Demonstrate nationalism, internationalism and dedication to service
10. Practice the principles of social accountability

7.8 Subjects / Modules / Blocks

Basic sciences and clinical sciences subjects are arranged sequentially in those schools using the discipline-based curriculum, while these are integrated in those with organ system-based integrated approach, and in PBL programs.

7.9 Teaching/learning activities

The main teaching-learning activities are large group teaching and small group discussion (SGD).

7.10 Assessment Methods

Formative Assessment and Summative Assessment

- Cognitive domain: Written exams (MCQ, Structured short answer-Modified Essay Questions)
- Psychomotor domain: Direct observation- MiniCEX, DOPS using rating scales, OSPE and OSCE, Review of logbooks
- Affective domain: Direct Observation, Checklists, Rating Scales (Team Assessment) Critical Incident Reports
- Communication skills: Direct observation, rating scales

7.11 Degree conferred

Medical schools confer the MD degree after 4 years, but there are a number of schools which confer the degree after 5 years.

7.12 Licensure examinations

The licensure examinations is a written examination consisting of MCQs in twelve subjects, both basic and clinical. It is administered by the Professional regulatory Board of Medicine, under the Professional Regulation Commission. It conducts the examination twice a year.

7.13 Professional Medical Regulatory Authority

The Professional Regulatory Board of Medicine is the professional medical regulatory authority created under the Medical Act of 1959. It is under the Professional Regulation Commission (PRC). Its main responsibilities revolve around its being a quasi-judicial and quasi-legislative agency. It conducts administrative investigations on cases filed against physicians, and issues resolutions to govern the practice of medicine. It administers the Physician Licensure Examinations. It issues Certificates of Registrations and Professional identification Cards. It also regulates the admission of foreign physicians into the country. It represents the profession of medicine in the ASEAN MRA meetings and negotiations, with a member sitting in the ASEAN Joint Coordinating Committee for Medical Practitioners (AJCCM).

7.14 Qualifications Levels of Basic Medical Education Degree

Graduates of the basic medicine program are assigned to Level 7: Postbaccalaureate Level of the Philippine Qualifications Framework.

7.15 Credit Transfer System and Student Mobility

There are three universities which are members of the ASEAN University Network (AUN). These are the University of the Philippines, Ateneo de Manila University and De la Salle University. They have medical schools, but the mobility of medical students has been limited. It is mainly done through bilateral MOUs and MOAs.

There are also universities and colleges which are under the UMAP and AIMS.

CHED has issued Memorandum Order (CMO) No. 11, S. 2014 entitled “Guidelines for

Participation of Selected Higher Education Institutions (HEIs) in the ASEAN International

Mobility for Students (AIMS) Program”.

Twelve HEIs were selected by CHED to participate in AIMS. These are the University of the

Philippines, De La Salle University, Ateneo de Manila University, University of Santo Tomas,

Central Luzon State University, Central Bicol State University of Agriculture, Central Mindanao

University, Lyceum of the Philippines University-Batangas, University of Mindanao, University of

St. La Salle, St. Paul University Philippines and Saint Louis University.

There is no cross enrolment in the first 3 years of Medical Education Program. In the clinical years, rotations could be done in other institutions (Cebu Institute of Medicine).

University of the Philippines College of Medicine (UPCM) has records of its students who had off-campus rotations in ASEAN and international universities and foreign students who spent time in the UPCM.

8. SINGAPORE

8.1 Higher Education Agency and Policies

The Ministry of Education regulates basic and higher education.

8.2 Medical Education Policies

The Singapore Medical Council (SMC) and the Ministry of Health (MOH) appointed the National Medical Undergraduate Curriculum Committee (NMUCC) to craft national outcomes and minimum standards for the undergraduate medical curriculum.

8.3 Quality Assurance and Regulatory Frameworks

The Singapore Medical Council (SMC) and Ministry of Health (MOH) act as the regulatory body and the accrediting bodies for medical schools.

Composition

Pursuant to Section 4 of the Medical Registration Act (relating to the constitution of the Medical Council), the Singapore Medical Council shall consist of the following members:

- the Director of Medical Services (MOH);
- Registered Medical Practitioners from each prescribed medical school in Singapore to be appointed by the Minister on the nomination of the Council of the university to which the prescribed medical school belongs, one of whom shall be the Dean of the medical school;
- 12 Registered Medical Practitioners (resident in Singapore) elected by the fully registered medical practitioners resident in Singapore; and
- 8 Registered Medical Practitioners (resident in Singapore) appointed by the Minister.

Mandate

- To accredit medical schools in Singapore
- To regulate and register medical school graduates to practice in Singapore

8.4 Requirement for entry to medical school

NUS Yong Loo Lin School of Medicine and Imperial College-NTU Lee Kong Chian School of Medicine use the following criteria:

- Singapore-Cambridge GCE A-level Certificate
 - International Baccalaureate Diploma
 - National University of Singapore High School Diploma
 - Polytechnic Diploma
 - International Qualifications
- Submission of IELTS or TOEFL or SAT (previously known as SAT Reasoning Test or SAT 1) or Pearson Test of English Academic (PTE Academic) or Ameson English scores are only compulsory for applicants
- i. with PRC Gao Kao qualification (i.e. applicants who will be taking Gao Kao in June 2016 and those who have already taken Gao Kao) OR
 - ii. who do not take up English language in Junior and Senior High School or taken English language only as a 2nd language.

Only scores obtained in the 2 years leading up to the application deadline will be considered

8.5 Curricula and curricular approaches

The two medical schools are implementing outcome-based education and organ system-based integration and problem-based learning approach.

8.6 Duration (number of years including internship) and curricular structure

The undergraduate medical curriculum lasts for five (5) years, including internship. The curricular structure starts with pre-clinical sciences with clinical relevance in the first two years and progressing to the clinical sciences in the last three (3) years.

8.7 Learning Outcomes

There are six (6) main learning outcomes which have been adopted:

- Patient care
- Medical knowledge
- Practice-based learning and improvement
- Interpersonal and communication skills
- Professionalism
- systems-based practice

8.8 Subjects / Modules / Blocks

NUS Yong Loo Lin Medical School utilizes the following:

Phase I: Normal Structure and Function with clinical relevance

Phase II: Abnormal Structure and Function with clinical relevance

Phase III: Core Clinical Practice – Medicine, surgery, paediatrics, orthopaedic surgery, family medicine, public health rotation, elective 1

Phase IV: Acute and Specialty Clinical Practice – emergency medicine, obstetrics and gynaecology, psychological medicine, anaesthesia, ENT, EYE, dermatology, elective 2

Phase V: Student Internship Programme – Medicine, Geriatric, Paediatrics, Surgery, Orthopaedic surgery, infectious disease, Posting in simulation (Advance cardiac life support)

8.9 Teaching/learning activities

The teaching-learning activities consist of the following:

Small groups

- Case-based learning
- Tutorials
- Simulation learning session
- Large group
- Collaborative learning cases (Main)
- Large group teaching using technology
- Flipped classroom

Research attachment

8.10 Assessment Methods

These are the various assessment methods being implemented to evaluate student performance:

- a. Written exercises (e.g. multiple choice, extended match, short answer and essay questions)
- b. Faculty assessments (e.g. oral exams, faculty global and checklist ratings)

- c. Simulated assessments (e.g. objective, structured clinical examinations and technology-based simulations)
- d. Peer review and self-assessments
- e. Observation in the real clinical environment on work-based assessment (e.g. mini-clinical evaluation exercise [mini-CEX])

8.11 Degree conferred

The degree conferred after the end of internship is MBBS.

8.12 Licensure examination

There is no national licensure examination in Singapore.

8.13 Professional Medical Regulatory Authority

The professional medical regulatory authority is the Singapore medical Council (SMC), a statutory board under the Ministry of Health. It is in charge of registering and licensing medical practitioners, and it maintains the Register of Medical Practitioners.

8.14 Qualifications Levels of Basic Medical Education Degree

Singapore uses the 7-level Workforce Skills Qualifications system (WSQ) which is focused on vocational qualifications. It has a provision for specialist diploma which is assigned to level 5. Level 7 is assigned to graduate diploma.

8.15 Credit Transfer System and Student Mobility

There are only three medical schools in Singapore, but the third one is a graduate medical school (Duke-NUS Graduate Medical School). With the basic standards of medical education have been set up by the National Medical Undergraduate Curriculum Committee (NMUCC), it will make credit transfer and student mobility easier.

A bilateral arrangement between Indonesia's Universitas Gadjah Mada (UGM) and the NUS Yong Loo Lin School of Medicine (NUS Medicine) has been established. It will focus on medical education, and will include student electives and the development of a global medicine curriculum. In addition, the two medical schools will work together to build clinical and governance capacity through training workshops as well as attachments in various medical specialties.

9. THAILAND

9.1 The Ministry of Education Higher Education Agency and Policies

The Ministry of Education (MOE) through the Office of Higher Education Commission (OHEC) regulates higher education in Thailand. The law that created the MOE and OHEC is the National Education Act of B.E. 2542 (1999).

The Office of Higher Education Commission (OHEC) is responsible for education at both undergraduate and graduate levels. The OHEC has the authority to strategize, manage and promote higher education with respect to the academic freedom and excellence of degree-granting institutions.

9.2 Medical Education Policies

The policies and standards to ensure high quality of medical education is properly maintained through the cooperation of the regulatory bodies, namely the Medical Council of Thailand and the Ministry of Education, through OHEC. Medical programs must be accredited by the Medical Council of Thailand in order for the graduates to be able to take the licensure examinations.

The Medical Council of Thailand conducts site visits, while OHEC approves the academic program (curriculum). The permit to open and operate is issued by the Minister of Education.

9.3 Quality Assurance and Regulatory Frameworks

Thailand is in the process of establishing the Institute for Medical Education Accreditation (IMEAc), using the World federation for Medical Education guidelines for accreditation. Accreditation will be mandatory.

At present, the Office of Higher Education Commission and the Office of National Education Standards and Quality Assurance (ONESQA) are performing the functions of external accreditors, with the use of set criteria, standards and procedures.

9.4 Requirement for entry to medical school

Graduation from senior high school is the entry requirement.

9.5 Curricula and curricular approaches

Outcome-based education is the most common, but medical schools have also adopted, integrated, organ system-based curricular approach, community-based curriculum.

9.6 Duration (number of years including internship) and curricular structure

The medical course has a total number of 6 years, divided into:

1 year Pre-medical

2 years Pre-clinical

3 years Clinical

9.7 Learning Outcomes

Maintain desirable attributes and Professional competencies (TMC) as follows:

1. Professional habits, attitudes, moral, and ethics.
2. Communication and Interpersonal skill.
3. Scientific knowledge of medicine.
4. Patient care
5. Health promotion and health care system: individual, community and population health
6. Continuous profession development

9.8 Subjects / Modules / Blocks

Modules and blocks deal with general education subjects in the first year, and basic sciences in the next two years, with clinical sciences in the last 3 years.

9.9 Teaching/learning activities

The main teaching-learning activities are small group discussion and large group teaching.

9.10 Assessment Methods

Basing on Domains/Competencies and Teaching-Learning Activities, the assessment methods are variously used as following

1. Intellectual skills:(1) Written tests : MCQ, Essay, Short Answer Questions (SAQ), Modified Essay Questions (MEQ), Constructed

Response Questions (CRQ), Extended Matching Items (EMI), (2) Oral tests,(3) Questionnaires

2. Communication skills, attitudes: Written tests and direct observation for practical tests in real situations and in simulated conditions such as Objective Structured Clinical Examination (OSCE) and Objective Structured Long Case Examination, Continuous Internal Assessment (CAI), Case Report

3. Practical skills: Log Book, Anecdotal Record, Portfolio Assessment, Clinical Performance Assessment, Global Rating Scales, Case Report, Chart Audit, Continuous Internal Assessment (CAI), Project-Based Report

9.11 Degree conferred

The degree conferred is Doctor of Medicine (MD) which is conferred at the end of 6th year (graduation from medical school)

9.12 Licensure examinations

The national licensure examinations consist of the following:

1. Basic Medical Sciences
2. Clinical Sciences
3. Modify Essay Question, OSCE, and Long Cases Examination

The exam is conducted by the Center for Medical Competency Assessment and Accreditation, approved by TMC.

9.13 Professional Medical Regulatory Authority

The Medical Council of Thailand is the professional medical regulatory authority established under the Medical Profession Act 1982.

Provisions of the Medical Profession Act include:

Section 6 There shall be established the Medical Council having the objects and authorities and duties as prescribed in this Act. The Medical Council shall be a juristic person.

Section 7 The Medical Council shall have the following objectives:

- (1) to control the professional conduct of the medical practitioner so as to be in compliance with the medical ethics;

(2) to promote the studies, research, and the professional practice in medicine;

(3) to promote the unity and to maintain the honour of the members;

(4) to assist, to advise, to disseminate and to educate the public and other organizations in matters concerning medicine and public health;

(5) to give advice or recommendations to the government on the issue of national health problems;

(6) to act as representative of the medical profession in Thailand.

Section 8 The Medical Council shall have the following authorities and duties:

(1) to register and to issue licences to applicants applying to be the medical practitioners;

(2) to suspend or to revoke the licence to be the medical practitioner;

(3) to recognize the degree, certificate in medicine or the professional diploma of various institutions;

(4) to recognize the various curricula for the medical training of the medical institutions;

(5) to recognize the academic standard of the medical institutions providing the training in (4);

(6) to issue the diploma in board of medical specialty in the various fields of the medical practice and to issue other certificates of special training in the medical profession.

9.14 Qualifications Levels of Basic Medical Education Degree

Thailand has national qualifications framework on higher education. It has levels 1-6, with domains and level descriptors. Graduates of medicine are assigned to level 2: Bachelor's degree. But when they obtain the status of specialists and subspecialists, they are assigned to level 6: doctoral. The Office of the Higher Education Commission (OHEC) is the agency tasked to implement the national qualifications framework.

9.15 Credit Transfer System and Student Mobility

With the Faculty of Medicine of both Mahidol University and Chulalongkorn University, there is limited mobility of students on a national basis. The reasons given include differences in schedule of modules, and the high standards being required before students are admitted to these two universities. However, regional and international mobility has been going on for many years, based on bilateral MOUs and MOAs. They are also members of student mobility programs like the AUN.

10. VIETNAM

10.1 Higher Education Agency and Policies

The Ministry of Education and Training (MOET) is the government agency in charge of higher education in Vietnam. It has the responsibility of managing higher education in the country, defining academic standards, making sure that standards are met, approving the opening of new schools and programs. The standards are announced in their website.

Legal Basis:

The Law on Higher Education 2012, which took effect in January 2013 provides the legal framework for the regulation of higher education in Vietnam. It incorporated provisions on institutional autonomy, quality assurance, international cooperation, university research mission, university mission in science and technology, private universities, national and regional universities, and university classification and ranking.

10.2 Medical Education Policies

Policies and standards are defined by the MOET in cooperation with the Ministry of Health (MOH). There is a Committee of Experts composed of representatives from both MOET and MOH which conducts site visits to medical schools. Standards in the curriculum and learning outcomes are defined. The goal of medical education and the kind of doctors to be produced are set by both MOET and MOH.

10.3 Quality Assurance and Regulatory Frameworks

The Ministry of Education and Training (MOET) and the Ministry of Health (MOH) cooperate with each other in regulating medical education.

Undergraduate medical education is under the MOET, while postgraduate medical education is under the MOH.

Starting in 2007-2008, external accrediting bodies have been established in four locations, namely:

1. Hanoi National University
2. Ho Chi Minh National University
3. Danang University
4. Association of Higher Education Institutions

The MOET also has an Examination and Accreditation Division. New programs are required to obtain accreditation first before a license is given to open and operate a medical school. All schools are required to submit an Institutional Self-survey Report.

10.4 Requirement for entry to medical school

The entry requirement is graduation from senior high school.

10.5 Curricula and curricular approaches

The medical schools are utilizing a traditional curricular approach which is discipline-based.

10.6 Duration (number of years including internship) and curricular structure

Medical education lasts for six years, with the following structure:

1st and 2nd years: mix of Basic Sciences and General Education program

3rd year-6th years: Basic and Clinical subjects

10.7 Learning Outcomes

Able to present and applied:

1. The fundamental rules/process:
 - structure/ component, operation and function of the human body in its normal and abnormal/pathology.
 - The interaction between the environment and human health, methods to maintain and improve living conditions in order to protect and improve human health.

2. The basic principles of diagnosis, treatment and prevention.
3. Laws and policies of the Nation for the care, protection and improving people's health.
4. The methodology/academy of science in terms of prevention, treatment and scientific research

10.8 Subjects / Modules / Blocks

General education subjects are taken in the first two years, with progression to basic science subjects and then with the clinical sciences in the last three years.

10.9 Teaching/learning activities

Large group teaching-learning is the main activity.

10.10 Assessment Methods

Medical schools use a variety of assessment methods which include the following:

Based on Domains/Competencies

1. Cognitive domain: Written exams (MCQ, Structured short answer), Oral Exams
2. Psychomotor domain: Direct observation,
3. Affective domain: Direct Observation
4. Communication skills: Direct observation, rating scales

Based on Teaching-Learning Activities

1. Didactic sessions / Lectures: Written exams (MCQ, Structured short answer), Oral Exams
2. Laboratory sessions: Direct observation, Oral Exams
3. Clinical Rotations: Direct observation, Oral Exams
4. Community Rotations: Direct observation

10.11 Degree conferred

The degree conferred is MD (Doctor of Medicine degree) which is conferred at the end of 6th year (graduation from medical school)

10.12 Licensure examinations

There is no national licensure examination. Right after graduation, and the diploma conferred, the Ministry of Health issues license to the medical graduate.

10.13 Professional Medical Regulatory Authority

The Ministry of Health confers licenses to medical graduates and regulates the practice of the medical profession.

10. 14 Qualifications Levels of Basic Medical Education Degree

The Vietnam Qualifications Framework is awaiting approval from higher authorities.

10.15 Credit Transfer System and Student Mobility

1. National Mobility among universities

Credit transfer and mobility among medical students of different medical schools is limited. There are big numbers of medical students admitted numbering as high as 500 students. The medical schools produce 10,000 graduates per year. The Director General of the Ministry of Health expressed apprehension on the quality of medical graduates.

2. International Mobility

However, the Hanoi Medical University, which is the oldest university in Vietnam, has collaborative partnerships with many countries. This include faculty and student exchange with universities from France, United States, Netherlands, United Kingdom, Sweden, Japan, Australia and Korea.

PART II COMPARISON OF VARIABLES

Part II presents a comparison of variables:

- Medical education data on higher education agencies, accrediting bodies, requirement for entry to medical school, curriculum and curricular approaches, duration and curricular structure, learning outcomes, teaching-learning activities, assessment methods, degree conferred and when it is conferred, licensure examinations, professional medical regulatory authority,
- National Qualification Framework, qualification level assigned to basic medical qualification, and
- Credit Transfer and Student Mobility
- Steps undertaken to
- Harmonization of Medical Education

A. COMPARATIVE DATA ON MEDICAL EDUCATION

Diagram 1: An overall scheme showing the various factors that shape and influence medical education systems in the ten countries is presented. These factors include laws passed by Parliament or Congress, or issued through Presidential decrees which are implemented by national higher education agencies. Of equal importance are the medical education policies that are crafted by higher education agencies in consultation with regulatory bodies, qualifications agencies when they are present, accrediting bodies, the medical schools, the professional medical regulatory authorities, and currently the ASEAN Integration with Mutual Recognition Arrangements aimed at enhancing mobility of professionals.

Overall Scheme

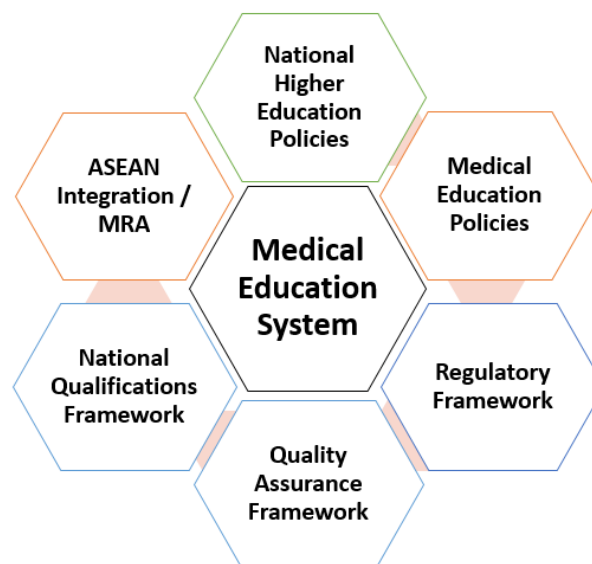


Table 1 shows the higher education agencies of the ten countries which craft policies on higher education. These are government agencies like the Ministry of Education/Ministry of Higher Education/Ministry of Health, and commission or office of higher education.

Table 1. Higher Education Agency

COUNTRY	HIGHER EDUCATION AGENCY
BRUNEI	Ministry of Education
CAMBODIA	Ministry of Education / Ministry of Health
INDONESIA	Ministry of Higher Education (MOHE)
LAO PDR	Department of Training and Research/Ministry of Health
MALAYSIA	Ministry of Higher Education (MOHE)
MYANMAR	Ministry of Education, Department of Higher Education
PHILIPPINES	Commission on Higher Education (CHED)
SINGAPORE	Ministry of Education
THAILAND	Office of Higher Education Commission (OHEC)
VIETNAM	Ministry of Education and Training (MOET)

Table 2 shows that the ten countries vary in the nature of their accreditation system and character of their accrediting bodies. Majority of the accrediting bodies are government agencies imposing mandatory accreditation. Indonesia is the only country with an accrediting body (IAAHEH) exclusively for health professions programs. It is an independent body but authorized by the government to maintain the high quality of health professions programs. The Philippines, on the other hand, is the only country which utilizes an independent private organization (PAASCU) as their accrediting agency for medical schools. The higher education agency of Vietnam implements an internal quality assurance system by requiring all medical schools to submit an institutional self-survey.

Table 2. Accrediting Agency

COUNTRY	ACCREDITING AGENCY
BRUNEI	Brunei Darussalam National Accreditation Council (BDNAC)

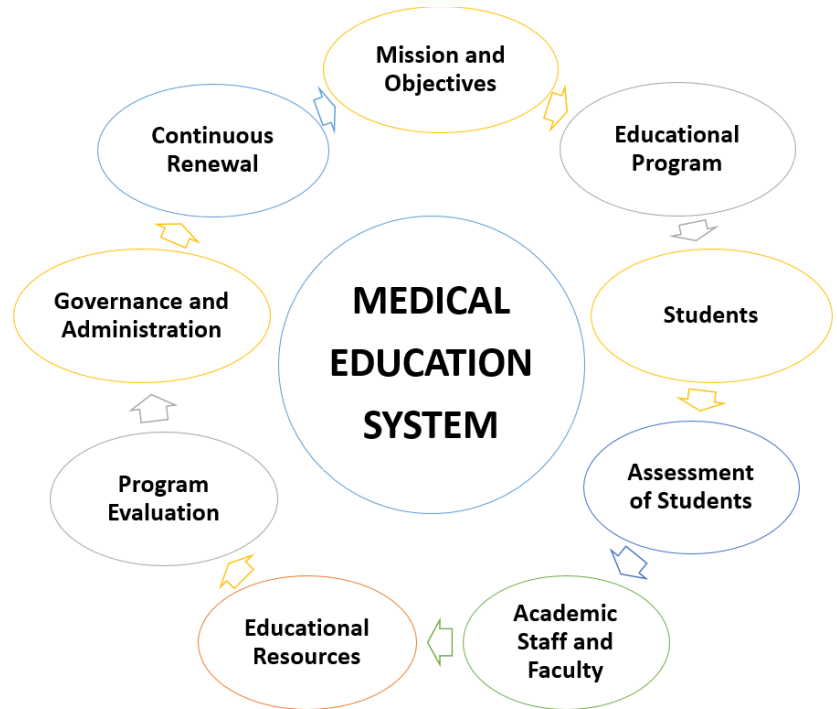
CAMBODIA	Accreditation Committee of Cambodia
INDONESIA	Indonesian Accreditation Agency for Higher Education in Health (IAAHEH)
LAO PDR	Center for Quality Assurance (CEQA)
MALAYSIA	Malaysian Qualifications Agency
MYANMAR	National Education Standard and Quality Assurance Committee
PHILIPPINES	Philippine Accrediting Agency for Schools, Colleges and Universities (PAASCU)
SINGAPORE	Ministry of Health, Singapore Medical Council
THAILAND	Office of the Higher Education Commission (OHEC), The Office for National Education Standards and Quality Assessment (ONESQA)
VIETNAM	Four accreditation centers were established (Hanoi National University, HCM National University, Danang University, Association of universities and colleges). The Ministry of Education and Training implements an Internal QA system. It requires all schools to submit an Institutional Self-survey.

*Myanmar has already created the National Education Standard and Quality Assurance Committee, but it is still developing its Quality Management following the guidelines of the AUN QA.

Diagram 2: The World Federation for Medical Education has identified nine global standards which function as the criteria for the accreditation of medical schools throughout the world. These standards have been universally accepted and adopted by accrediting bodies in many countries.



Global Standards



This study on harmonization of medical education focused only on the following global standards:

1. Educational program elements
2. Entry requirement for students
3. Assessment of students

Table 3 provides details on the number of medical schools in the ten countries. Based on a very wide range in the number of medical schools, there were two groups that were identified:

Group 1: Countries with 20-75 medical schools (Indonesia, Philippines, Malaysia, Thailand and Vietnam)

Group 2: Countries with 1-6 medical schools (Myanmar, Cambodia, Singapore, Lao PDR and Brunei)

The countries belonging to Group 1 were selected for the conduct of key informant interviews with officials of higher education agencies, accrediting bodies, and

professional medical regulatory authorities and discussions with Deans and other officials of medical schools.

Table 3. Number of Medical Schools

COUNTRY	Number of Medical Schools
BRUNEI	1
CAMBODIA	5
INDONESIA	75
LAO PDR	1
MALAYSIA	32
MYANMAR	6
PHILIPPINES	44
SINGAPORE	3
THAILAND	21
VIETNAM	20

Table 4 shows the pre-requisite for entry to medical schools. There are eight countries requiring graduation from senior high (grade 12) as entry requirement to medical school. Singapore admits various levels which include graduates from senior high school, international baccalaureate degrees and certificates from polytechnic schools. Indonesia selects graduates from senior high schools, belonging to the science track. The Philippines is the only one requiring a bachelor's degree as entry requirement. Myanmar admits students who finished grade 11 of senior high.

Table 4. Pre-requisite for Entry to Medical School

COUNTRY	PRE-REQUISITE FOR ENTRY
BRUNEI	Graduate senior high school
CAMBODIA	Graduate senior high school
INDONESIA	Graduate senior high school, science track
LAO PDR	Graduate senior high school
MALAYSIA	Graduate senior high school

MYANMAR	Graduate 11th Grade of senior high school
PHILIPPINES	Graduate of baccalaureate course
SINGAPORE	Various sources of certificates from senior high school to international baccalaureate
THAILAND	Graduate senior high school
VIETNAM	Graduate senior high school

Table 5 lists the different curricula and curricular approaches. Seven countries listed integrated, organ system based curriculum and problem-based learning approach. The rest utilized discipline-based, traditional approach.

Table 5. Curricula / Curricular Approach

COUNTRY	CURRICULA CURRICULAR APPROACHES
BRUNEI	Problem-based learning
CAMBODIA	Discipline-based, traditional
INDONESIA	Integrated Organ system-based
LAO PDR	Integrated Organ system-based
MALAYSIA	Integrated organ system-based
MYANMAR	Discipline-based, traditional
PHILIPPINES	Integrated Organ system-based, Problem-based Learning, discipline-based
SINGAPORE	Integrated Organ system-based
THAILAND	Integrated Organ system-based
VIETNAM	Discipline-based, traditional

Table 6 shows that all medical schools have adopted various numbers of learning outcomes.

Table 6. Learning Outcomes

COUNTRY	LEARNING OUTCOMES
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BRUNEI	Three learning outcomes, with four curricular themes
CAMBODIA	Six learning outcomes
INDONESIA	Eight learning outcomes submitted. The learning outcomes comply with the Indonesian Qualifications Framework.
LAO PDR	10 Learning Outcome listed.
MALAYSIA	8 Learning Outcomes, complying with MMC and MQA LOs
MYANMAR	Institutional objective/ Departmental Objectives/ Specific Learning Objectives
PHILIPPINES	10 Learning outcomes prescribed by the CHED through the PSGs.
SINGAPORE	6 major learning outcomes
THAILAND	6 learning outcomes
VIETNAM	Learning outcomes identified

Table 7 contains variation in the duration or length of medical education ranging from five to eight years. However, all medical schools utilize the same curricular structure which include pre-clinical and clinical phases.

Table 7. Duration and Curricular Structure

COUNTRY	DURATION (in years) and CURRICULAR STRUCTURE
BRUNEI	Three (3) years at country of origin and another 3 years in foreign partner schools
CAMBODIA	Eight (8) years, 3 cycles
INDONESIA	Six (6) years, 4 years basic, 2 years clinical (includes internship)
LAO PDR	Six (6) years, 3 years pre-clinical and 3 years clinical
MALAYSIA	Five years, 2 years pre-clinical, 3 years clinical
MYANMAR	Seven years, 2 ½ years pre-clinical, 3 ½ clinical, internship

PHILIPPINES	Five (5) years, 3 years pre-clinical and 2 years clinical
SINGAPORE	Five years, 2 years pre-clinical, 2 years clinical, internship
THAILAND	Six (6) years, 1 year GE, 3 years pre-clinical, and 2 years clinical
VIETNAM	Six (6) years, 1 year GE, 3 years basic sciences, 2 years clinical

Table 8: Curricular content in both pre-clinical and clinical levels was essentially the same for all countries.

Table 8. Curricular Content: Subjects/Modules/Blocks

COUNTRY	CURRICULAR CONTENT/SUBJECTS
BRUNEI	PBL modules leading to discussion of basic and clinical sciences, horizontally and vertically integrated under four themes
CAMBODIA	General education subjects, basic sciences and clinical sciences subjects traditionally sequenced
INDONESIA	Blocks of various organ systems with discussions of basic and clinical sciences horizontally and vertically integrated
LAO PDR	Modules of various organ systems with discussions of basic and clinical sciences horizontally and vertically integrated
MALAYSIA	Modules / Phases of various organ systems with discussions of basic and clinical sciences horizontally and vertically integrated
MYANMAR	General education subjects, basic sciences and clinical sciences subjects
PHILIPPINES	PBL and Integrated Curricula: Blocks and modules of various organ systems with discussions of basic and clinical sciences horizontally and vertically integrated Traditional curricula: basic sciences and clinical sciences subjects traditionally sequenced
SINGAPORE	Modules of various organ systems with discussions of basic and clinical sciences horizontally and vertically integrated

THAILAND	Modules of various organ systems with discussions of basic and clinical sciences horizontally and vertically integrated
VIETNAM	General education subjects, basic sciences and clinical sciences subjects traditionally sequenced

Table 9: The teaching-learning activities revolve around large group teaching and small group discussions.

Table 9. Teaching-Learning Activities

COUNTRY	MAIN TEACHING-LEARNING ACTIVITY/ACTIVITIES
BRUNEI	Small group discussion
CAMBODIA	Mainly large group teaching
INDONESIA	Small group learning.
LAO PDR	Mainly large group teaching with lectures and Small Group Discussion
MALAYSIA	Small group discussion (SGD)
MYANMAR	Large group learning and SGD
PHILIPPINES	Small Group discussion (SGD) and large group teaching with lectures
SINGAPORE	Small Group discussion and lectures
THAILAND	Small Group discussion (SGD)
VIETNAM	Large group teaching thru lectures

Table 10 shows that medical schools utilize the same assessment methods.

The variety of assessment methods include the following:

1. For cognitive domain: written exams which include multiple choice questions (MCQ), extended matching questions, essay, short answer questions, Objective Structured Clinical Exams (OSCE)
2. For psychomotor domain: objective structured practical exams (OSPE), review of records and logbooks
3. For attitudes: direct observation using rating scales, critical incident reports
4. For multiple domains: portfolio assessment

Note: These methods are used for both formative and summative purposes, for assessment of different domains, for assessment of attainment of learning

outcomes/competencies, for different teaching-learning activities, at the start, at the middle or end of modules and blocks, and in different settings.

Table 10. Assessment Methods

COUNTRY	ASSESSMENT METHODS
BRUNEI	Variety of assessment methods
CAMBODIA	Mainly MCQ, OSCE
INDONESIA	Variety of assessment methods
LAO PDR	Variety of assessment methods
MALAYSIA	Variety of assessment methods
MYANMAR	Variety of assessment methods
PHILIPPINES	Variety of assessment methods
SINGAPORE	Variety of assessment methods
THAILAND	Variety of assessment methods
VIETNAM	Variety of assessment methods

Table 11: The degrees being conferred on graduates of the medicine course consist mainly of MBBS (Bachelor of Medicine, Bachelor of Surgery) and MD (Doctor of Medicine or Medical Doctor). These degrees are awarded at the end of the medical course (5-8 years in duration) which may or may not include one year of internship. Cambodia awards three degrees at the end of 3, 6 and 8 years of study in the medical school.

Table 11. Degree Conferred and when conferred

COUNTRY	DEGREE CONFERRED/WHEN CONFERRED
BRUNEI	MBBS or MD after 6 years
CAMBODIA	Certificate of basic medical science after year 3, Bachelor of Medicine after year 6, Doctor of Medicine after year 8

INDONESIA	Bachelor of Medicine after 4 years and MD after another 2 years
LAO PDR	MD after 6 years
MALAYSIA	MBBS after 5 years
MYANMAR	MBBS after 7 years
PHILIPPINES	MD after 4 years for majority of schools MD after 5 years for a few schools
SINGAPORE	MBBS after 5 years. Pre-requisite prior to internship.
THAILAND	MD after 6 years
VIETNAM	MD after 6 years

Table 12 details the countries administering national licensure examinations and those without licensure examinations.

Table 12. Licensure Examinations

COUNTRY	LICENSURE EXAMINATIONS
BRUNEI	No national licensure examination
CAMBODIA	No national licensure examination. Only national exit exam.
INDONESIA	National Competency Exam administered by a Committee assembled by the Ministry of Higher Education (MOHE), cooperating with the Association of Medical Schools (AIPKI) and Medical Professional Organization (IDI)
LAO PDR	No national licensure examination.
MALAYSIA	No national licensure examination.
MYANMAR	No national licensure examination.
PHILIPPINES	National licensure examination administered by the Professional Regulatory Board of Medicine under the Professional Regulation Commission.

SINGAPORE	No national licensure examination.
THAILAND	Three-step licensure examinations (Basic, Clinical, OSCE) conducted by the Center for Medical Competency Assessment and Accreditation, approved by the Thailand Medical Council.
VIETNAM	No national licensure examination

B. COMPARATIVE DATA ON NATIONAL QUALIFICATIONS FRAMEWORKS

Among the ten Southeast Asian countries, seven have developed national qualifications frameworks that included the higher education sector. These are Brunei Darussalam, Cambodia, Indonesia, Malaysia, Myanmar, Philippines and Thailand. At the present time, Vietnam is awaiting approval of its NQF by higher authorities.

As a rule, national qualifications frameworks have the following components:

- ❖ Sectors like basic education, TVET and higher education
- ❖ Qualifications levels most frequently ranging from eight to nine
- ❖ Domains of learning
- ❖ Level descriptors

1. Brunei Darussalam

The Brunei Darussalam Qualifications Framework (BDQF) contains eight (8) levels, covering three sectors, namely school, technical vocational and higher education. In the column for higher education, the following qualifications are assigned to the corresponding levels:

Bachelor's Degree: Level 6
 Master's Degree: Level 7
 Post Graduate Diploma: Level 7
 Post Graduate Certificate: Level 7
 Doctoral degree: Level 8

There are five (5) domains, namely

- Knowledge and skills (the types of knowledge and skills involved)
- Practice: Applied Knowledge and Understanding (the context in which the knowledge and skills are applied)
- Generic Cognitive Skills
- Communications, ICT and Numeracy Skills

- Autonomy, Accountability and Working with others (the level of independence)

LEVEL 6 (Bachelor's Degree is an example of a qualification at this level)

Knowledge and understanding	Practice: Applied knowledge and understanding	Generic cognitive skills	Communication, ICT and numeracy skills	Autonomy, accountability and working with others
Characteristic outcomes of learning at this level include the ability to:				
<p>Demonstrate and/or work with:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A broad and integrated knowledge and understanding of the scope, main areas and boundaries of a subject / discipline. <input type="checkbox"/> A critical understanding of a selection of the principal theories, principles, concepts and terminology. <input type="checkbox"/> Knowledge that is detailed in some areas and /or knowledge of one or more specialisms that are informed by forefront developments. 	<ul style="list-style-type: none"> <input type="checkbox"/> Use a selection of principal skills, techniques, practices and/ or materials associated with a subject/ discipline. <input type="checkbox"/> Use a few skills, techniques, practices and/ or materials that are specialised or advanced. <input type="checkbox"/> Practice routine methods of enquiry and/or research <input type="checkbox"/> Practice in a range of professional level contexts which include a degree of unpredictability. <input type="checkbox"/> Apply analytical with situational and environmental aligning with baseline data. 	<ul style="list-style-type: none"> <input type="checkbox"/> Undertake critical analysis, evaluation and/ or synthesis of ideas, concepts, information and issues. <input type="checkbox"/> Identify and analyse routine professional problems and issues. <input type="checkbox"/> Draw and a range of sources in making judgments. 	<p>Use a range of routine of skills and some advanced and specialised skills in support of established practices in a subject/ discipline - for example:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Make formal and informal presentations on standard/ mainstream topics in the subject/discipline to a range of audiences. <input type="checkbox"/> Use a range of IT applications to support and enhance work. <input type="checkbox"/> Interpret, use and evaluate numerical and graphical data to achieve goals/ targets. 	<ul style="list-style-type: none"> <input type="checkbox"/> Exercise autonomy and initiative in some activities at a professional level. <input type="checkbox"/> Take some responsibility for the work of others and for a range of resources. <input type="checkbox"/> Practice in ways which take account of own and others' roles and responsibilities. <input type="checkbox"/> Work under guidance with qualified practitioners. <input type="checkbox"/> Deal with ethical and professional issues in accordance with current professional and/or ethical codes or practices seeking guidance where appropriate.

THE BRUNEI DARUSSALAM QUALIFICATIONS FRAMEWORK (BDQF)

BDQF Levels	School Sector Qualifications	Technical and Vocational Education Sector Qualifications	Higher Education Sector Qualifications
8			Doctoral Degree
7			<ul style="list-style-type: none"> • Master's Degree • Post Graduate Diploma • Post Graduate Certificate
6			Bachelor's Degree
5		<ul style="list-style-type: none"> • Advanced Diploma • Higher National Diploma (HND) 	<ul style="list-style-type: none"> • Foundation Degree • Advanced Diploma • Higher National Diploma (HND)
4	<ul style="list-style-type: none"> • GCE "A" Level • IGCSE "A" Level • IB Diploma • STPU 	<ul style="list-style-type: none"> • Diploma • Higher National Technical Education Certificate (HNTec) 	
3	<ul style="list-style-type: none"> • GCE "O" Level (Grades A–C) • IGCSE and GCSE "O" Level (Grade A* - C) • SPU (Grades A-C) • BTEC level 2 Diploma 	<ul style="list-style-type: none"> • Skills Certificate 3 (SC3) • National Technical Education Certificate (NTec) 	
2	<ul style="list-style-type: none"> • GCE "O" Level (Grades D-E) • IGCSE "O" Level (Grade D-E) • SPU (grades D) • BTEC Level 2 Extended Certificate 	<ul style="list-style-type: none"> • Skills Certificate 2 (SC2) • Industrial Skills Qualifications (ISQ) 	
1	BTEC Level Introductory Certificate	Skills Certificate 1 (SC1)	

Source: Ministry of Education Brunei Darussalam <http://moe.gov.bn/bdnac>

2. Cambodia

The Cambodian Qualifications Framework contains eight (8) levels, covering two sectors, namely technical vocational education and training (TVET) and higher education. The following higher education qualifications are assigned the corresponding level:

Bachelor's Degree: Level 6

Master Degree: Level 7

Doctoral Degree: Level 8

CQF LEVEL	TVET	Higher Education
8	Doctoral Degree	Doctoral Degree
7	Master of Technology/Business	Master Degree
6	Bachelor of Technology / Engineering / Business	Bachelor Degree
5	Higher Diploma	Associate Degree
4	Technical & Vocational Certificate III	
3	Technical & Vocational Certificate II	
2	Technical & Vocational Certificate I	
1	Vocational Certificate	

3. Indonesia

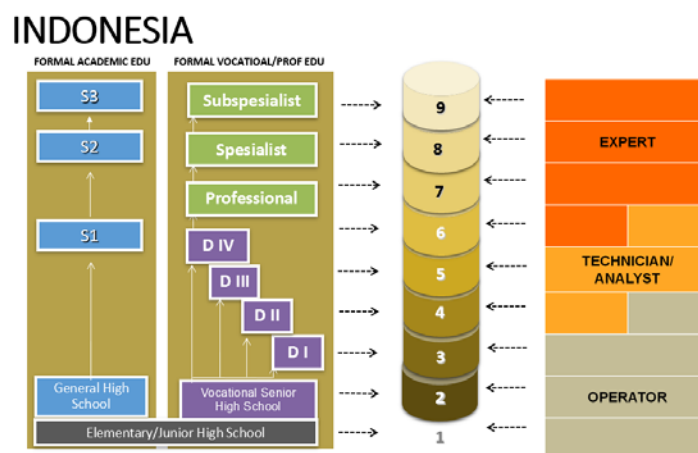
The Indonesian Qualifications Framework contain nine (9) levels, with columns for Formal Academic Education, Formal Vocational/ Professional Education and a column for Operators, Technician Analyst and Expert. The domains of learning which were adopted include:

The higher education qualifications are assigned to the corresponding levels:

Bachelor's Degree: Level 7 (Professional)

Specialist/Subspecialist: Level 8

Doctoral: Level 9



4. Malaysia

The Malaysian Qualifications Framework contains eight (8) levels of qualifications, covering three sectors, namely Skills, Vocational and Technical and Higher Education. There is a fourth column which pertains to Accreditation of Prior and Experiential Learning (APEL). There are eight (8) domains of learning outcomes:

- Knowledge
- Practical skills
- Social skills and responsibilities
- Values, attitudes, and professionalism
- Communication, leadership and team skills
- Problem solving and scientific skills
- Information management and lifelong learning skills
- Managerial and entrepreneurial skills

Higher education qualifications were assigned with corresponding levels:

Bachelor's Degree: Level 6

Master's Degree: Level 7

Postgraduate Certificate and Diploma: Level 7

Doctoral Degree: Level 8

The level descriptors for the qualification of Bachelor's Degree consist of the following:

- Demonstrate knowledge and comprehension on fundamental principles of a field study, acquired from advance textbooks
- Use the knowledge and comprehension through methods that indicate professionalism in employment
- Argue and solve problems in their field of study
- Show techniques and capabilities to search and use data to make decisions having considered social, scientific, and relevant ethical issues
- Communicate effectively and convey information, ideas, problems and solutions to experts and non-experts
- Apply team and interpersonal skills which are suitable to employment
- Possess independent study skills to continue further study with a high degree of autonomy

MQF Levels	Sectors			Life Long Learning
	Skills	Vocational & Technical	Higher Education (Academic & Professional)	Accreditation of Prior Experiential Learning APEL
8			Doctoral Degree	
7			Masters Degree	
			Postgraduate Cert. & Diploma	
6			Bachelors Degree	
			Graduate Cert. & Diploma	
5	Advanced Diploma	Advanced Diploma	Advanced Diploma	
4	Diploma	Diploma	Diploma	
3	Skills Cert. 3	Vocational & Technical Certificate	Certificate	
2	Skills Cert. 2			
1	Skills Cert. 1			

5. Myanmar

Myanmar National Qualification Framework (MNQF) Draft was formulated in August 2014 with inputs from experts from various Ministries, Rectors from 25 Universities under 12 Ministries and experts from UNESCO and GIZ. The Framework has 8 levels of qualifications, covering Basic education, Technical and vocational education and training, and higher education. Level descriptors are based on knowledge and skills, application and professional behavior and responsibilities.

Proposed Myanmar National Qualification Framework

Level	Sectors			Lifelong Learning
	Basic Education	TVET	Higher Education	
8			Doctoral Degree	Recognition of Prior Learning (Assessment and Validation)
7 A			Masters' Degree	
7 B			Post Graduate Diploma	
6		Degree	Bachelor degree	
5 A		Advanced Diploma	Associate degree	
5 B		Diploma	Diploma	*Vocational & Technical Certificate / Skills Certificate (V&TC/SC)
4		V&TC/SC 4		
3		V&TC/SC 3		
2	High School	V&TC/SC 2		
1	Middle School / Primary School	V&TC/SC 1		

6. Philippines

The Philippine Qualifications Framework has eight (8) levels of qualifications, with three domains, and level descriptors. It covers three sectors, namely Basic Education, Technical Education and Skills Development and Higher Education.

The three domains are:

- Knowledge, Skills and Values
- Application
- Degree of Independence

The higher education qualifications are assigned to the corresponding levels:

Bachelor's Degree: Level 6

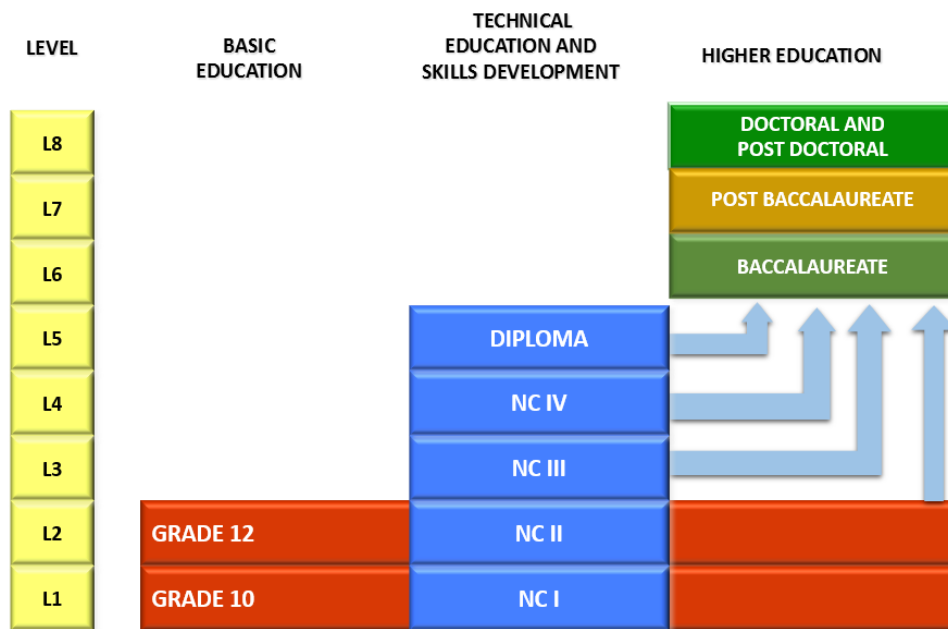
Postbaccalaureate Degree: Level 7

Doctoral and Postdoctoral Degree: Level 8

The level descriptors for Baccalaureate Degree, Level 6, are illustrated in this table.

LEVEL	6
KNOWLEDGE, SKILLS AND VALUES	Demonstrated broad and coherent knowledge and skills in their field of study for professional work and lifelong learning
APPLICATION	Application in professional work in a broad range of discipline and/or for further study
DEGREE OF INDEPENDENCE	Substantial degree of independence and/or in teams of related fields with minimal supervision
QUALIFICATION TYPE	Baccalaureate Degree

THE PHL QUALIFICATIONS FRAMEWORK



7. Thailand

The National Qualifications Framework of Thailand contain nine (9) levels, covering both technical-vocational and higher education sectors. However, there is also a Thailand Qualifications Framework for Higher Education using six (6) levels. The domains of learning include:

The higher education qualifications are assigned to corresponding levels:

- Bachelor's Degree: Level 2
- Graduate Diploma: Level 3
- Master's Degree: Level 4
- Higher Graduate Diploma: Level 5
- Doctoral Degree: Level 6

The descriptors for Bachelor's Degree, Level 2, are the following:

NATIONAL QUALIFICATIONS FRAMEWORK OF THAILAND	
LEVEL	QUALIFICATIONS TITLES
9	Doctoral Degree

8	Higher Graduate Diploma
7	Master's Degree
6	Graduate Diploma
5	Bachelor's Degree
4	Diploma/ Associate Degree
3	Certificate III (vocational certificate – skilled worker)
2	Certificate II (upper secondary and initial vocational training - semi skilled worker)
1	Certificate I (middle secondary and initial vocational training - worker with basic skills)

NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION (THAILAND)	
LEVEL	QUALIFICATIONS TITLES
6	Doctoral Degree
5	Higher Graduate Diploma
4	Master's Degree
3	Graduate Diploma
2	Bachelor's Degree
1	Associate Degree

Table 13 contains the levels where graduates of basic medical education are assigned to. It varies from Level 2 to Level 7.

TABLE 13. LEVELS ASSIGNED TO GRADUATES OF BASIC MEDICAL EDUCATION IN COUNTRIES WITH FRAMEWORKS CONTAINING HIGHER EDUCATION SECTOR

COUNTRY	NQF LEVEL ASSIGNED TO GRADUATES OF BASIC MEDICAL EDUCATION
BRUNEI DARUSSALAM	Level 6
CAMBODIA	Level 6 (MBBS) Level 7 (Medical Doctor)
INDONESIA	Level 7
MALAYSIA	Level 6

MYANMAR	Level 6
PHILIPPINES	Level 7
THAILAND	Level 2
VIETNAM	Level 6

C. COMPARATIVE DATA ON CREDIT TRANSFER AND STUDENT MOBILITY

Transfer of academic credits is the process of evaluating the components of a qualification to determine the overall/equivalence with another qualification by establishing credits (as comparable units) for individuals' academic work and achievements. CTS is a mechanism through which higher education institutions share students' workload and accomplishments with other institutions to facilitate their horizontal mobility and vertical progression. The systems seek to avoid duplication of studies and saving time and money for students who decide to embark on an exchange programme. An appropriate system of credit transfer is a key facilitator of student mobility and cooperation among higher education institutions (Need for a Common Credit Transfer System (SEAMEO RIHED, Project: Building a Common Credit Transfer System for Great Mekong Subregion (GMS) and Beyond)

Assoc Prof. Dr. Sauwakon Ratanawijitrasin (ASEAN Higher Education QA Framework & Credit Transfer System (CTS), from the Faculty of Social Sciences & Humanities, Mahidol University, classified credit transfer systems into:

1. Bilateral
2. Multilateral

The bilateral CTS are products of arrangements between educational institutions formalized through MOUs and MOAs. In medicine, it could be between two medical schools in the same country or belonging to different countries.

The multilateral CTS are arrangements among institutions under organizations, many of which are regional or international. A list provided in the presentation included the following:

- European Credit Transfer and Accumulation System (ECTS)
- UMAP Credit Transfer Scheme (UCTS)
- ASEAN Credit Transfer System (ACTS)
- Asian Credit Transfer System (ACTS)
- Southeast Asia Credit Transfer System (SEA CTS)
- EU-ASEAN Credit Transfer System Network (EACTS)

- Academic Credit in Higher Education ,the United Kingdom, by the U.K. Quality Assurance Authority (QAA)
- Credit and Qualifications Framework for Wales (CQFW)
- Joint Degree/MOU/ a series of agreements between institution
- Scottish Credit and Qualifications Framework (SCQF)
- Credit accumulation and transfer system (CATS) in Africa
- The Go8 Credit Transfer Agreement, (Australia)—group of 8 universities
- Sistema de Creditos Academicos (System for Academic Credits or SICA) and Complemento al Titulo (Complement to the Title or CAT for Latin America and Carribeans).
- The New Zealand Qualifications Authority—National System
- USA and Canada CTS handled at States level

A number of them are being implemented in the Southeast Asian and the Asia-Pacific regions. Its impact on medical students need to be studied and analyzed.

Student mobility is closely linked with the presence of credit transfer systems. Junor and Asher, (Student Mobility and Credit Transfer: A National and Global Survey, Educational Policy Institute, June 2008) stated that “Student mobility is defined as any academic mobility which takes place within a student’s program of study”. They classified student mobility into two types:

1. Mobility for an entire program of study (diploma or degree mobility)
2. Mobility for part of a program (credit mobility).

The authors enumerated and discussed the barriers to student mobility which influence the decisions of students to study in another institution. Among the most critical are:

1. Lack of information or motivation
2. Financial resources
3. Academic factors

The academic factors revolve around lack of academic qualification and the absence of credit recognition or non-transferability of credits. The lack of an assurance that the time spent in another institution will be afforded full credit will definitely prevent students from spending one semester or a year away from their original institution.

Examination of the data and responses gathered from the research on medical education in the ten Southeast Asian countries:

Data gathered through the self-administered questionnaire

The TEMPLATE FOR GATHERING MEDICAL EDUCATION DATA FROM THE TEN ASEAN MEMBER STATES contained Number 9. Curricular Structure Number of Hours / Credit Units of the different courses

A number of countries supplied information on the number of credits per year level (Cambodia, Vietnam), per group of subjects (Lao PDR), and per stage of medical education (Thailand). The lack of uniformity may be due to the differences in the duration/length of the medical education course, and variation in the subjects being offered in the different year levels.

Table 14: Number of Credits

CAMBODIA	LAO PDR	THAILAND	VIETNAM
Medical education: 8 years	Medical education: 6 years	Medical education: 6 years	Medical education: 6 years
Year 1 (foundation): 31 credits Year 2 : 33 credits Year 3: 36 credits Year 4: 38 credits Year 5: 39 credits Year 6: 44 credit Year 7-8: internship: 39 credits	General subjects: 20 credits Basic Medical Sciences: 72 credits Clinical Sciences: 132 credits Elective subject: 04 credits Total number of credits: 228 credits	Pre-medical : 1 st years (30-40 credits) Pre-clinical years: 2 nd and 3 rd years (80 credits) Clinical Year: 4 th , 5 th (90 credits) Clinical year : 6 th year, Clinical Clerkship Rotation (40 credits) Total number of credits: 180-263 credits	1 st Year: 37 credits 2 nd Year: 40 credits 3 rd Year: 37 credits 4 th Year: 35 credits 5 th Year: 39 credits 6 th Year: 32 credits

Three medical schools, University of Health Sciences (Cambodia) Universiti Kebangsaan Malaysia (UKM) and University of the Philippines, submitted details for the credits assigned to each subject or module.

Table 15: Number of Credits, University of Health Sciences, Cambodia
Cycle 2: Y4-Y6

- Surgical Pathology: 155 credits
- Psychiatry: 6 credits
- Anatomo-pathology: 6 credits
- Microbacteriology: 4 credits
- Parasitology: 4 credits
- Medical pathology: 10 credits
- Gyneco-Obstetric: 10 credits
- Physiopathology: 2 credits
- Pediatric: 6 credits
- Medical ethics: 2 credits
- Pharmacology: 4 credits
- ENT: 1 credit
- Ophthalmology: 1 credit
- Surgical Therapeutic: 9 credits
- Medical therapeutic: 6 credits
- Radiology: 3 credits
- Forensic medicine: 3 credits
- Anesthesia-Reanimation: 2 credits
- Clinical practice: 21 credits: 21 credits
- French: 6 credits

Table 16: Number of Credits, Universiti Kebangsaan Malaysia (Complete structure in Annex 1)

Course Structure of MD Program, Faculty of Medicine, UKM

Year	Course Structure	Credit Unit
Year 1	Semester 1	
	FF1113 Cellular Biomolecules	3
	FF1213 Tissues of Body	3
	FF1333 Membranes & Receptors	3
	FF1412 Metabolism	2
	FF1713 Personal & Professional Development IA (Adaptation Skills I)	3
	Semester 2	
	FF1312 Human Genetics	2
	FF1244 Infection & Immunity	4
	FF1223 Mechanisms of Diseases	3
	FF1424 Musculoskeletal System	4

	FF1521 Clinical Sciences I (History Taking I)	1
	FF1622 Medicine & Society I (Health & Population)	2
	FF1722 Personal & Professional Development IB (Adaptation Skills II)	2

Table 17. Number of Credits, University of the Philippines (Complete structure in Annex 2)

Learning Unit V					
Subject	No. of Hours.	Units	Subject	No. of Hours	Units
OS 217	4 wks	6	OPHTHA 250	1 wk	1.5
THER 201	2 wks	3	ORL 250	1 wk	1.5
ANESTH 250	1 wk	1.5	PEDIA 250	4 wks	6
FCH 250.1	2 wks	3	RADIO 250	2 wks	3
FCH 250.2	2 wks	3	SURG 250	3 wks	4.5
INTEG 250	1 wk	1.5	IDC 204	1 wk	1.5
MED 250	3 wks	4.5	IDC 213	24 hrs	1.5
MUSC 250	2 wks	3	IDC 221	1 wk	1.5
NEURO 250	2 wks	3	IDC 222	1 wk	1.5
OB-GYN 250	4 wks	6	ELECTIVES	2 wks	3
		TOTAL	39 wks+24 hrs		60

The following guidelines provide the basis for the computation of credits:

- The unit credit is the semester hour. Each unit of credit is at least 16 semester-hours of lecture instruction, 32 semester hours laboratory and 24 semester hours for ward work
- Lecture, SGD, Panel Discussion- 1 hour = 1/16 unit
- Laboratory, Independent Study- 1hour = 1/32 unit
- Clinical rotations, ward work- 1 hour = 1/24 unit

D. STEPS UNDERTAKEN TO HARMONIZE MEDICAL EDUCATION

As Part of the DATA-GATHERING TEMPLATE Part VI: Additional information

Question: In your country what are the steps/activities undertaken to harmonize medical education to allow for credit and student mobility within the country and later in the ASEAN region? Please describe.

The responses include the following:

- Credits transfer has not been practiced. The national exit exam is set up to ensure students graduated from different medical schools met minimum standard. There is no restriction on within country mobility. For mobility within ASEAN steps has been taken: At University level: curriculum shift from discipline-based to competency based is being

developed. Although French is still widely used at medical school, English teaching is also common. At national level: National Qualification Framework has been developed for easy comparison. Policy level: The government has signed MRA with other AMSs. Medical regulatory body has been working under AJCCM to develop facilitate mobility of medical practitioners within ASEAN. Registration system is in place and being improved. New laws and procedures are being developed to accommodate the mobilities. (Cambodia)

- The Health Educational system in Lao PDR has a particular condition since we have only one medical school. Mobility of medical student within the country is not applicable.

For undergraduate program, the mobility of medical students within ASEAN countries is just only for study tour but many medical Doctors graduated from Lao medical school continued their study abroad including ASEAN countries. We are now revising our medical curriculum in order to make it more harmonized with other ASEAN countries and expected that mobility of medical students can be realized in the near future. (Lao PDR)

- MQA setting the criteria and standards which all medical schools need to comply with otherwise they will not be able to obtain accreditation. In a way, this is responsible for the harmonization of medical education in Malaysia since all medical schools pursue the same program outcomes, have the same subjects (discipline-based, integrated and PBL), have the same structure (pre-clinical and clinical). (Malaysia)
- Recently, Myanmar Medical Universities are planning to reform discipline based traditional curriculum to the outcome based curriculum using integrated teaching strategy. Professionalism, Ethics and Research activities, already incorporated in current curriculum will be emphasized more. Inter-professional education, credit and GPA system will be introduced in the new curriculum. This modified new curriculum will be implemented in December 2017 intake.(Myanmar)
- The move to increase basic education from 10 to 12 years by the Philippine government is an attempt to make our high school graduates at par in terms of age and competencies with ASEAN and other foreign high school graduates. The Philippine Qualifications Framework has also been drawn up by the Professional Regulations Commission (PRC) to allow harmonization of college offerings that will allow greater student mobility within the ASEAN region. The UPCM Dean is a member of the ASEAN Medical Deans' Network, an association of 12 medical schools belonging to 10 ASEAN countries. The group has been working on creating common

accreditation requirements for medical schools, conducting collaborative research for common research interests and increasing student engagement in interscholastic programs. The UPCM has created an Office of External Linkages to manage the growing number of institutions interested in establishing formal linkages with the UPCM. (Philippines)

- Under the auspices of Ministry of Health, basic standards of medical education have been set up by the National Medical Undergraduate Curriculum Committee (NMUCC). All medical schools are mandated to follow these basic standards. NUS Yong Loo Lin School of Medicine is part of the grouping of ASEAN Deans of medical schools and is actively committed to explore possibilities to harmonise medical education within the region.(Singapore)
- All medical schools must be recognized by TMC before the operation with the following criteria, (1). Common competencies prescribed by TMC for all medical curriculum to be recognized (2). Diversification of curriculum design according to missions of the universities (3). Students exchange program within Thailand and other countries. (Thailand)

From the responses, it can be observed that majority of medical schools view the harmonization of medical education in terms of learning outcomes, common subjects, teaching-learning process, assessment methods as contributing factors towards building up a credit transfer system which enhances student mobility.

Table 18: Status of Credit Transfer and Student Mobility in the Southeast Asian Countries

COUNTRY	DATA FROM COUNTRY PRESENTATIONS
BRUNEI DARUSSALAM	<p>1. At the moment, no form of credit transfer system are used for our 3+3 medical model since this is not a full pledged medical school.</p> <p>2. There are summer/winter exchange programmes between UBD and Faculty of Medicine, Kagawa University, Japan (5-6 weeks)</p> <p>3. UBD medical students attended anatomy session at Universiti Malaysia Sabah (2 weeks)</p>
CAMBODIA	Credit transfer system is not yet functional.
INDONESIA	<p>Credit transfer system:</p> <ul style="list-style-type: none"> • ASEAN: Under the Asean International Mobility for Students (AIMS) • Universitas Indonesia: credit transfer can be done by rector decision and liberation from courses

	<ul style="list-style-type: none"> • This system can be easily applied if there is similarity in curriculum • In practice, credit transfer is usually easily conducted in elective subjects: elective implementation as part of SPICES model in medical education curriculum
LAO PDR	Credit Transfer System and Student Mobility not yet introduced.
MALAYSIA	<p>Credit transfer: A student who has taken and passed a course in a program of study, can apply for course credit transfer to a new study program is subject to:</p> <ul style="list-style-type: none"> • Equality curriculum / syllabus: at least 80 % • Passing grade - student must achieve a minimum grade of C for the course • Credit score - credit transfer granted courses have a credit score that is equivalent to the course program to be followed. • Accreditation - the courses are given credit transfer must be from an accredited program.
MYANMAR	<ul style="list-style-type: none"> • Regarding student mobility within the country, students are allowed to transfer schools if reason is valid • From 2017-18 academic year, semester based program structure, credit system and GPA will be used • Developing outcome based integrated spiral curriculum for the MBBS program • Having commonality will put us one step closer towards student mobility • Details of the procedure need to be discussed between schools and to think of whether it should be started with optional and elective topics in the initial phase.
PHILIPPINES	<ul style="list-style-type: none"> • In higher education, CHED equivalency certification in programs under AUN, UMAP, AIMS. • CHED has issued memorandum orders containing policies, standards, guidelines on the credit transfer and student mobility being implemented by higher education institutions

	which are members of the student mobility programs
SINGAPORE	No presentation.
THAILAND	Credit transfer and mobility among medical schools was not presented.
VIETNAM	<p>Within the country:</p> <ul style="list-style-type: none"> • Credits are recognized if equivalent • Students can move from one school to other inside country • In reality, not common due to the difference of entrance score <p>Outside the country: Not recognize the credits studied abroad Foreign students studied some credits in VN.</p>

E. DETERMINATION OF HARMONIZATION

1. The Washington Accord (WA)

George Peterson of the Washington Accord Secretariat, 2001–2007, made the following declaration:

“How do we build mutual understanding among nations about the quality of engineers who enter the globally connected workplace? The Washington Accord agreement answered the question. Begin by building bridges toward mutual recognition of the **substantial equivalence of engineering education**. The fundamental supports for this bridge are globally accepted attributes expected of successful engineers. The founding signatories of the Washington Accord agreed that graduates of each other’s accredited programmes were expected to possess these attributes and therefore were

prepared to enter engineering practice. The Washington Accord model has become **the international gold standard for mutual recognition of engineering education**”. (25 Years Washington Accord Booklet)

In 1989 the six foundation signatory organisations from Australia, Canada, Ireland, New Zealand, the United Kingdom and United States observed that their individual processes, policies, criteria and requirements for granting accreditation to university level programmes were substantially equivalent. They agreed to grant (or recommend to registering bodies, if different) the same rights and privileges to graduates of programmes accredited by other signatories as they grant to their own accredited programmes.

The most important step taken by the WA signatories was the adoption of graduate attributes. The graduate attributes are generic to the education of professional engineers in all engineering disciplines. They categorise what graduates should know, the skills they should demonstrate and the attitudes they should possess. The graduate attributes have been refined over more than a decade and in 2013 were adopted by the signatories as the exemplar (or reference point) against which substantial equivalence of their own accreditation requirements are to be assessed. In addition, the graduate attributes are intended to assist signatories and provisional members to develop outcomes-based accreditation criteria for use by their respective jurisdictions. In effect, there was substantial equivalence of the graduates and accreditation systems of the current 16 member countries.

Towards Harmonization of Higher Education in Southeast Asia: Malaysia's Perspective

"It is important to appreciate that in the context of Southeast Asia, with its diverse systems, harmonization is about comparability; not standardization or uniformity of programs, degrees and the nature of higher education institutions". (Sirat, Azman, Abu Bakar, 2014)

A common space or higher education area does not intend to create a uniform or standardised system of higher education. The primary goal is to create general guidelines in areas such as degree comparability through similar degree cycle and qualifications framework, quality assurance, lifelong learning, or credit transfer system and so on (Armstrong, 2009; Clark, 2007).

There is therefore acceptance of substantial equivalence and comparability as the operational definition of harmonization.

2. Determination of presence of harmonization (comparability and substantial equivalence) of medical education in the ten Southeast Asian countries

a. FINDINGS WHICH DENOTE COMPARABILITY/SUBSTANTIAL EQUIVALENCE

- Higher education agencies and policies on higher education are present in all countries
- Medical education policies are stated
- Entry requirement practically the same with the Philippines imposing a higher requirement (bachelor's degree)

- Majority have adopted learning outcomes, one has learning objectives
- Curricular content (medical subjects) are substantially the same for basic and clinical sciences
- Curricular structure divided into pre-clinical and clinical stages in all medical schools
- Teaching-learning activities are substantially the same
- Assessment methods are substantially the same

b. FINDINGS WHICH DENOTE PRESENCE OF VARIATION

- Accreditation systems vary with countries imposing either mandatory or voluntary system, and with the use of an independent external accrediting body or the same government regulatory body
- Curricular approaches vary from disciplined-based, to integrated organ system-based approach, PBL, outcome-based
- Variation in the duration/length of medical education (5-8 years)
- Assignment of credits to subjects vary
- The degrees conferred are either MD or MBBS
- There are countries with national licensure examinations while there are also a number without licensure examinations
- Credit transfer system and student mobility on a national and regional level are not well implemented for a number of reasons
- Qualification levels vary although majority of medical qualifications are assigned to Level 6; level descriptors could not be found in a number of countries
- National qualifications frameworks are in different levels of developments, the most established and mature being the Malaysian Qualifications Framework, with a dedicated agency (MQA) implementing it

3. SUBSTANTIAL AREAS FOR POSSIBLE HARMONIZATION

As pointed out in the literature cited earlier, harmonization does not entail standardization and uniformity in all components of the medical education system. The key, therefore, is in the identification of substantial areas for possible harmonization, and allowing differences in other areas as already acceptable.

- Differences in qualification levels assigned to graduates of basic medical education is allowed as long as the general descriptors are substantially equivalent or comparable

- Accreditation systems may adopt comparable criteria, standards and procedures regardless of which kind of agency is implementing it
- Credit transfer system, with medical schools adopting comparable number of units assigned to different subjects, to facilitate mobility of medical students

PART III MODELS OF THE REGULATORY AND QUALITY ASSURANCE FRAMEWORK

An examination of the regulatory and quality assurance frameworks being implemented in a number of countries revealed the presence of similarities, unique characteristics and best features that may be adopted by other countries. This section provides a general description of the framework, roles of the different agencies and bodies, and a diagram detailing what agencies regulate medical schools, medical graduates and medical professionals, and what are the accrediting bodies maintaining the high quality of medical education. The framework in four countries, namely, Indonesia, Malaysia, Philippines and Thailand, are described.

1. INDONESIA

The Indonesian model is similar to the others in the presence of a higher education agency, the Ministry of Education, as the regulatory body for all HEIs, including medical schools. The most distinguishing feature is the presence of the Indonesian Accrediting Agency for Higher Education in Health (IAAHEH) which is devoted exclusively to the accreditation of health professions programs. Accreditation is mandatory.

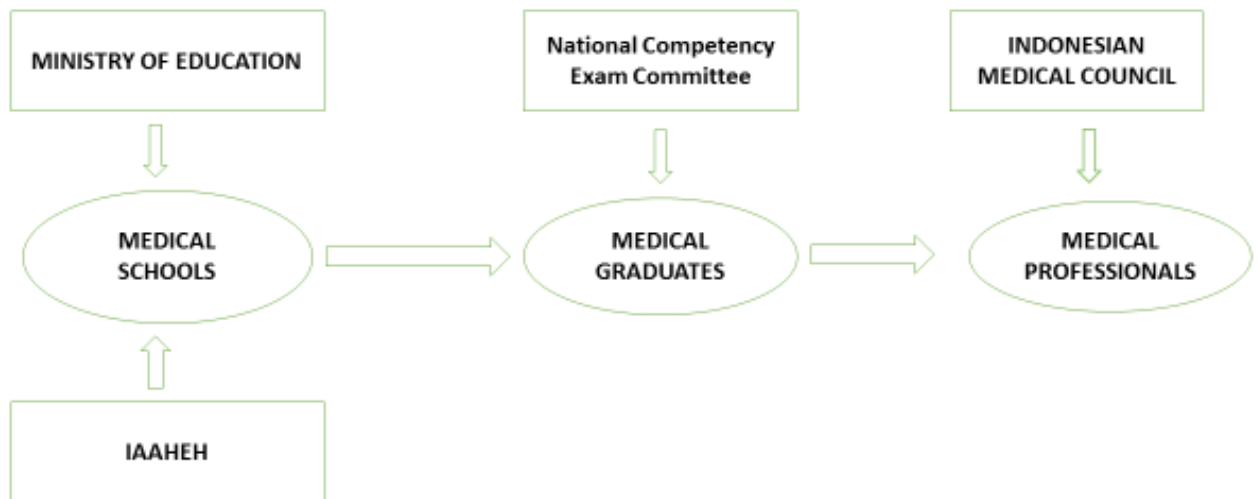
Roles of the different agencies or bodies:

Ministry of Education: regulates HEIs which include medical schools

IAAHEH: external accrediting body which deals exclusively with health professions academic programs

National Competency Exam Committee: administers examinations to medical graduates

Indonesian Medical Council: regulates medical practice



2. Malaysia

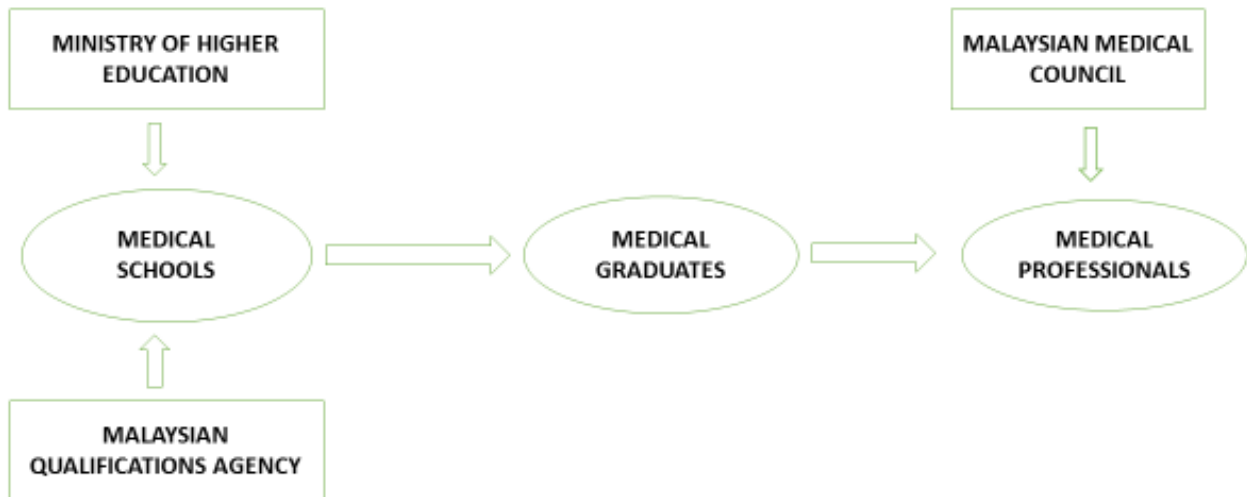
The Malaysian model has a higher education agency, the Ministry of Higher Education, as regulatory agency for all HEIs including medical schools. Malaysia is the only country with a dedicated qualifications agency implementing its national qualifications framework and at the same time acting also as the external accrediting body for academic programs. It relies on the mandatory accreditation of medical schools in the maintenance of high quality of medical education. It does not have a national licensure examinations. The medical professionals are regulated by the Malaysian Medical Council.

Roles of the different agencies or bodies:

Ministry of Higher Education: regulates HEIs which include medical schools

MQA: external accrediting body which accredits academic programs

Malaysian Medical Council: regulates medical practice



3. Philippines

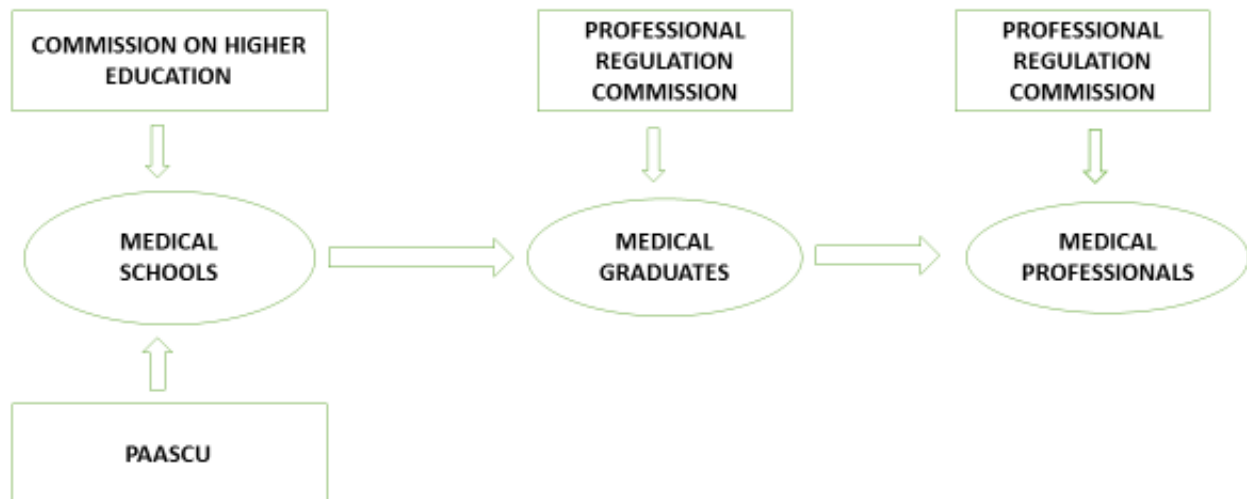
The Philippine model has a higher education agency, the Commission on Higher Education, as the regulatory agency for HEIs including medical schools. It utilizes a private organization, the Philippine Accrediting Association for Schools, Colleges and Universities (PAASCU) as the external accrediting body for medical programs. Accreditation is voluntary. In addition, the Philippines is the only country with a Professional Regulation Commission, with professional regulatory boards regulating 43 professions. The Professional Regulatory Board of Medicine administers the physician licensure examinations and regulates the practice of medicine in the country.

Roles of the different agencies or bodies:

Commission on Higher Education: regulates HEIs which include medical schools

PAASCU: private external accrediting body which accredits academic programs

Professional Regulation Commission: administers licensure examination to medical graduates and regulates practice of profession



4. Thailand

The Thailand model has a higher education agency, the Office of the Higher Education Commission (OHEC), as the regulatory for all HEIs including medical schools. The Thailand Medical Council confers recognition to medical schools in order that graduates will be allowed to take the national licensure examinations. The OHEC and the Office of National Education Standards and Quality Assurance (ONESQA) conducts accreditation of medical schools. The Center for Competency Assessment and Accreditation administers the three-step national licensure examinations for medical graduates under the authority of the Thailand Medical Council, the regulatory body for the practice of the medical profession.

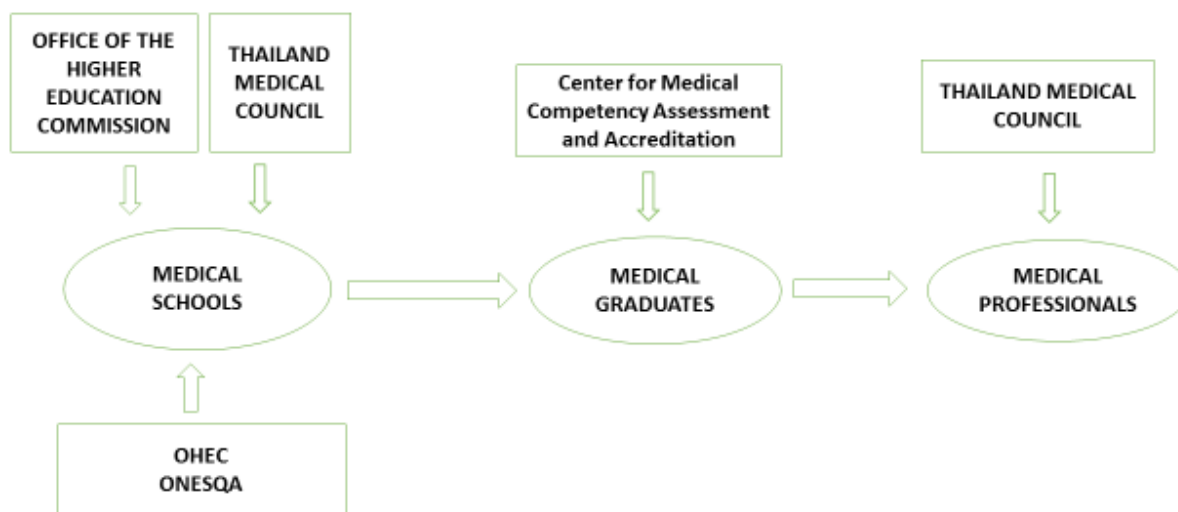
Roles of the different agencies or bodies:

Office of the Higher Education Commission: regulates HEIs which include medical schools

OHEC/ONESQA: accredit academic programs

Center for Medical Competency Assessment and Accreditation: administers licensure examination to medical graduates

Thailand Medical Council: confers recognition to medical schools to allow graduates to take the licensure examination and regulates medical practice



V. CONCLUSION

1. Qualification levels

The fact that the national qualifications frameworks of the ten countries are in different stages of development has affected the harmonization efforts among the ten countries. Malaysia has the most established and most mature system with the Malaysian Qualifications Agency (MQA) as the implementing agency and also acting as the external accrediting body for different academic programs. In other Southeast Asian countries, government agencies which have regulation of higher education institutions as their primary responsibility are also the ones implementing their own NQFs. This may have affected the dissemination of the principles and the application of the concepts of their NQFs to all stakeholders so much so that many school administrators have not completely grasped the key concepts, the role of NQFs in their curriculum and the basis of assigning qualifications to certain levels.

The differences in the levels assigned should not pose a substantial issue because it is the learning outcomes as expressed in the level descriptors under the defined domains of learning which are more important to examine in the determination of comparability.

The proper procedure is to reference the particular qualification in a particular profession, for example medicine, to the ASEAN Qualifications Reference Framework (AQRf) following the set criteria and processes set by the Task Force for the AQRf. The formal referencing of NQFs to the AQRf has been scheduled in

2018, with the Referencing Guidelines for the AQRF (Coles and Bateman, 2015) enumerating eight steps, namely:

1. Set up the bodies that will manage the referencing process.
2. Make a proposal for the level-to-level linkages between the NQF and the ARQF.
3. Carry out a national consultation on the basis of the proposal.
4. Write a referencing report that takes into account the outcomes of the national consultation and the views of international experts.
5. Ensure that the relevant responsible bodies endorse the referencing report.
6. Present the referencing report to the Board and a discussion follows amongst peers.
7. If required, provide clarifications and further evidence to the Board.
8. If, over time, changes in the NQF and relationship between the NQF and the AQRF occur, update the report and have it reconsidered by the Board.

The formal referencing is a complex process involving extensive technical work, the preparation of which may last two years. The ten countries have been advised to perform pilot testing of selected professions this year (2016) in preparation for the 2018 formal referencing.

2. Credit transfer system and student mobility

Interviews with key informants and the country presentations showed that credit transfer system and student mobility on national and regional levels are still very limited. As explained by Deans of medical schools, the differences in the student admissions criteria among medical schools within the country is a big factor. Medical students from lower-ranked medical schools find it very difficult to be admitted to higher-ranked medical schools even for very short rotations. Other factors cited were the differences in the schedule of modules, in the number of credits assigned to different subjects. Compared to undergraduate programs in other professional courses where students stay for one semester or even one year in a host university, medical students have only indulged in short rotations at the clinical level. These were also true on a regional basis. The medical schools of one country which have crafted MOUs and MOAs with other medical schools of other countries are the one which are more successful in implementing their credit transfer system and student mobility. The presence of student mobility programs like the AUN, AIMS and UMAP and the endorsement of higher education agencies

have helped push the mobility of students. The slow progress in mobility of medical students can be explained by the fact that the fields of study listed under the student mobility programs do not include medicine.

Student mobility on an international level seems to be more operational in many medical schools with the presence of linkages with multiple foreign universities, which have expanded to exchange of faculty and researchers.

3. Harmonization of medical education

There are two levels in the determination of presence of harmonization of medical education. Many deans of medical schools contend that in their own countries, there is harmonization because all medical schools follow the same set of standards in medical education, comparability in the learning outcomes, and are accredited by the same accrediting body using the same criteria, standards and procedures.

On a regional level, based on curricular content, teaching-learning activities and assessment methods, it can be safely concluded that there is harmonization of medical education. However, given that there are more areas where variation exists, we are now left to decide which criteria are more substantial in determining harmonization.

The Accreditation Board for Engineering and Technology (ABET) of the United States, one of the recognized accrediting agencies in the Washington Accord, offered this definition of substantial equivalence/equivalency.

““Substantial equivalency” means that a program is comparable in program content and educational experience, but may differ in format or method of delivery. It implies reasonable confidence that the program has prepared its graduates to begin professional practice at the entry level. While these evaluations followed policies and procedures similar to those used for accreditation, no accreditation action was taken, nor was there any assumption that a program undergoing accreditation would be accredited as a result of such review.

Substantial equivalency is not binding on colleges, universities, employers, or licensing agencies.

Most of the programs that were recognized as substantially equivalent have now been accredited”.

The ABET picked program content and educational experience as the two most important criteria for determination of equivalency, allowing variation in the other elements or components of an educational system.

4. Regulatory and quality assurance framework

All countries have regulatory mechanisms in the form of their parliament or congress crafting the enabling legislations, with ministries and commissions implementing the provisions, and adding decrees, memorandum orders, policies as guide to higher education institutions. In addition, in a number of countries, medical councils and medical boards participate in the regulation of medical schools, their graduates, and medical professionals.

The quality assurance mechanisms being implemented in the ten countries include both internal and external quality assurance systems. The IQA is in the form of the performance of an institutional self-survey and the submission of a formal report to the regulatory agency. The external quality assurance system involves an agency or body which usually is independent of the regulatory agency, but authorized by the same regulatory agency. In the ten countries, there is variation in the nature of the external accrediting bodies, and in some, only an IQA is present.

It can, therefore, be concluded that, based on the ABET definition of substantial equivalency, there is harmonization of medical education on a national and regional basis based on the medical curriculum content and educational experience with the same uniform structure of pre-clinical education and clinical training, the same teaching-learning activities and assessment methods.

VI. RECOMMENDATIONS

The recommendations that are being forwarded are meant to remedy the gaps that have been identified. Since standardization and uniformity is not the goal, and variations are allowed in a number of components, improvements can be made in the following areas:

1. Definition of basic medical qualifications based mainly on the domains of learning and level descriptors and not on the qualification levels which range from Level 2 to Level 7. The drawback is that formal referencing of national qualifications frameworks to the ASEAN Qualifications Reference Framework will only be conducted in 2018. Countries with NQFs which only have the technical-vocational sector and have not incorporated the higher education sector will not be able to address this gap.
2. To Accrediting Agencies: push for the harmonization of criteria, standards and procedures
3. To Student Mobility Programs: there is a need to expand membership to include all universities and all courses, although this may take years to accomplish because of the large number of HEIs.

4. To ASEAN Medical Deans Summit and Deans of medical schools:
 - 4.1 discuss credits assigned to subjects and their course codes to facilitate identification of courses by students, faculty, registrars and school administrators
 - 4.2 improve documentation of student mobility, both inward and outbound.
 - 4.3 establish international relations offices

VII. REFERENCES

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2. Morshidi Sirat (Universiti Sains Malaysia), Norzaini Azman (Universiti Kebangsaan Malaysia) & Aishah Abu Bakar (University of Malaya), **Towards Harmonization of Higher Education in Southeast Asia: Malaysia's Perspective**
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4. Sauwakon Ratanawijitrasi, **ASEAN Higher Education QA Framework & Credit Transfer System**, Regional Workshop on Quality Assurance in Higher Education 5 August 2014, Colombo, Sri Lanka
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6. Simone Ravaiol, **HARMONIZING HIGHER EDUCATION: "STANDARD" PERSPECTIVES IN SUPPORT OF THE BOLOGNA PROCESS**, Akademik Bilişim 2009 Harran Üniversitesi, Şanlıurfa 11 Şubat – 13 Şubat 2009
7. **25 Years of Washington Accord**, International Engineering Alliance

This appendix was taken from the Data on Competency and outcomes-based, integrated hybrid curriculum submitted by the University Kebangsaan Malaysia.

Course Structure of MD Program, Faculty of Medicine, UKM

Year	Course Structure	Credit Unit
Year 1	Semester 1	
	FF1113 Cellular Biomolecules	3
	FF1213 Tissues of Body	3
	FF1333 Membranes & Receptors	3
	FF1412 Metabolism	2
	FF1713 Personal & Professional Development IA (Adaptation Skills I)	3
	Semester 2	
	FF1312 Human Genetics	2
	FF1244 Infection & Immunity	4
	FF1223 Mechanisms of Diseases	3
	FF1424 Musculoskeletal System	4
	FF1521 Clinical Sciences I (History Taking I)	1
	FF1622 Medicine & Society I (Health & Population)	2
	FF1722 Personal & Professional Development IB (Adaptation Skills II)	2
Year 2	Semester 1	
	FF2113 Blood & Lymph	3
	FF2214 Cardiovascular System	4
	FF2313 Respiratory System	3
	FF2433 Urinary System	3
	FF2511 Clinical Sciences IIA (History Taking II & Physical Examination I)	1
	FF2613 Medicine & Society II (Statistics & Epidemiology)	3
	FF2712 Personal & Professional Development IIA (Community Services I)	2
	Semester 2	
	FF2125 Gastrointestinal System	5
	FF2242 Endocrine System	2
	FF2325 Neuro Sciences	5
	FF2443 Reproductive System	3
	FF2521 Clinical Sciences IIB (Physical Examination II)	1
	FF2622 Comprehensive Health Care	2
	FF2722 Personal & Professional Development IIB (Community Services II)	2

Year 3	Semester 1 FF3118 Medicine I FF3618 Medicine & Society III (Community Health) FF3714 Personal & Professional Development IIIA (Leadership)/	8 8 4
	Semester II FF3128 Surgery I FF3226 Obstetrics & Gynaecology I FF3723 Personal & Professional Development IIIB (Teamwork) Elective	8 6 3
Year 4	Semester I FF4118 Psychiatry FF4212 ORL-HNS FF4314 Ophtalmology FF4412 Anaesthesiology FF4713 Personal & Professional Development IVA FF4812 Special Study Module I (Proposal Development & Submission) FF4911 Forensic Pathology I	8 2 4 2 3 2 1
	Semester II FF4127 Paediatrics I FF4229 Orthopaedics & Traumatology FF4723 Personal & Professional Development IVB (Medical Ethics) FF4822 Special Study Module II (Ethics Approval & Organization of Data Collection) FF4921 Forensic Pathology II	7 9 3 2 1
Year 5	Semester I FF5115 Family Medicine FF5213 Emergency Medicine FF5316 Internal Medicine II FF5713 Personal & Professional Development V (Medical Career) FF5816 Special Study Module III (Data Collection, Analysis & Report Writing) FF5911 Forensic Pathology III	5 3 6 3 6 1
	Semester II FF5126 Surgery II FF5227 Paediatrics II FF5326 Obstetrics & Gynaecology II Professional Examination	6 7 6
Total Credit Units (excluding University courses-CITRA & English): 195		

English Courses: 5 credits

Year	Course Structure	Credit Unit
Year 1	Semester 1 LMCE1012 – Academic Communication I	2
	or LMCE1022 – Academic Communication II	2
	Semester 2 LMCE2042 – Workplace Communication III	2
Year 2	Semester 2 LMCE3031 – Professional Written Communication	1
Total Credit Unit		5

CITRA UKM Courses: 30 credits

CITRA Components	Course Structure	Credit Unit
Wajib Universiti	LMCW1022 – Asas Keusahawanan dan Inovasi	2
	LMCW2163 – Tamadun Islam dan Tamadun Asia	3
	LMCW2173 – Hubungan Etnik	3
	LMCW2922 – Kemahiran Insaniah	2
Citra Universiti	Citra Etika, Kewarganegaraan & Ketamadunan	4
	Citra Bahasa, Komunikasi & Literasi	4
	Citra Kepimpinan, Keusahawanan & Inovasi	2
	Citra Peradaban, Kuantitatif & Kualitatif	2
	Citra Kekeluargaan, Kesihatan & Kehidupan	2
	Citra Sains, Teknologi & Kelestarian	2
	*Mana-mana kursus yang bertaraf Kursus Citra Universiti	4
Total Credit Unit		30

Total Credit Units for MD UKM Program: 195 + 30 + 5=220 credits

This appendix was taken from the Data on Organ System Integrated (OSI) Medical Curriculum submitted by the University of the Philippines College of Medicine.

THE INTARMED CURRICULUM

LEARNING UNIT I: PREPARATORY MEDICINE I

First Semester

Course	Description	Credit/units
Comm I & II	Communication Skills	6
Kom I & II	Kasanayan sa Komunikasyon	
Hist 1	Kasaysayan ng Pilipinas	3
Nat Sci II	Foundations of Earth Science & Biology	3
Math 17	Algebra & Trigonometry	5
Philo I	Philosophical Analysis	3
IDC191	Introduction to Patient Care I	(1.5)
PE		(2.0)
NSTP		(3.0)
		20

Second Semester

Course	Description	Credit/units
Chem 14/14.1	General Chemistry	4
Math 100	Introduction to Calculus	4
Biology 22	General Zoology	5
Soc Sci I	Foundations of Behavioral Sciences	3
Hum I / Humanidades I	Literature, Man and Society /Panitikan, Tao at Lipunan	3
Hist 5	Kasaysayan ng Kalusugan	3
IDC192	Introduction to Patient Care I I	(1.5)
PE		(2.0)
		22

Summer

Course	Description	Credit/units
Math 101	Elementary Statistics	3
P.I. 101	Life and Works of Rizal	3
		6

LEARNING UNIT II: PREPARATORY MEDICINE II

First Semester

Course	Description	Credit/ units
Biology 25	Vertebrate Structure & Function	5
Chem 31	Elementary Organic Chemistry	3
Physics 51 & Physics 51.1	General Physics I and General Physics I Laboratory	4
Hum II	Art, Man and Society	3
RGEP 1*	Arts and Humanities cluster	3
RGEP 3*	Math and Science Cluster	3
IDC193	Introduction to Patient Care III	(1.5)
PE		(2.0)
		21

Second Semester

Course	Description	Credit/ units
Biology 30	Genetics and Developmental Biology	5
Chem 40	Elementary Biochemistry	3
Physics 52 & Physics 52.1	General Physics II and General Physics II Laboratory	4
STS	Science, Technology and Society	3
RGEP 2*	Social Science and Philosophy cluster	3
FCH 101	Health Care Delivery	1.5
IDC201	Perceptions & Values in Medicine History of Medicine	(1.5)
PE		(2.0)
		19.5

** Courses in the Revitalized General Education Program (RGEP) offered by the University will apply.*

CREDIT UNIT OR HOURS PER SEMESTER

The unit credit is the semester hour. Each unit of credit is at least 16 semester-hours of lecture instruction, 32 semester hours laboratory and 24 semester hours for ward work. The unit credit shall be used whenever applicable, otherwise the number of hours per semester of each course shall be specified.

Approved number of hours or weeks shall be converted to number of UNITS based on University rules.

Lecture, SGD, Panel Discussion - 1 hour = 1/16 unit

Laboratory, Independent Study - 1 hour = 1/32 unit

Clinical rotations, ward work - 1 hour = 1/24 unit

Average proportion of Lecture, SGD, - 3:1

Panel discussion versus Laboratory,

Independent study

To pro-rate proportion of credit hour - 1 hour = 1/20 unit (0.05)

* Credit Load Equivalent in “Units” of the Doctor of Medicine Program

Learning Unit III		Credit Units		
Subject	Hours	1st Sem	2nd Sem	Total
HS 201	40	2.0		2.0
OS 201	120	6.0		6.0
OS 203	104	5.0		5.0
OS 204	72	3.5		3.5
OS 205	144	7.0		7.0
IDC 211	32	0.75	0.75	1.5
IDC 202	64	1.5	1.5	3.0
OS 202	136	3.5	3.5	7.0
HD 201	130		6.5	6.5
HD 202	120		6.0	6.0
IDC 211.1	90		4.5	4.5
OS 206	142		7.0	7.0
TOTAL	1194	29.25	29.75	59.00

Learning Unit IV		
Subject	Hours	Credit Units
HS 202	108	5.5
THER 201	80	4.0
OS 213	216	11.0
OS 215	180	9.0
IDC 212	16	1.0
IDC 203	64	3.0
OS 216	72	3.5
OS 211	180	9.0
OS 212	180	9.0
OS 214	180	9.0
ELECTIVE	32	1.5
TOTAL	1308	65.5

Learning Unit V					
Subject	No. of Hours.	Units	Subject	No. of Hours	Units
OS 217	4 wks	6	OPHTHA 250	1 wk	1.5
THER 201	2 wks	3	ORL 250	1 wk	1.5
ANESTH 250	1 wk	1.5	PEDIA 250	4 wks	6
FCH 250.1	2 wks	3	RADIO 250	2 wks	3
FCH 250.2	2 wks	3	SURG 250	3 wks	4.5
INTEG 250	1 wk	1.5	IDC 204	1 wk	1.5
MED 250	3 wks	4.5	IDC 213	24 hrs	1.5
MUSC 250	2 wks	3	IDC 221	1 wk	1.5

NEURO 250	2 wks	3	IDC 222	1 wk	1.5
OB-GYN 250	4 wks	6	ELECTIVES	2 wks	3
		TOTAL	39 wks+24 hrs		60

Learning Unit VI					
Subject	No. of Hours	Units	Subjects	No. of Hours	Units
ANESTH 251	2 wks	3	ORL 251	2 weeks	3
EM 251	2 wks	3	ORTHO 251	2 weeks	3
FCH 251	4 wks	6	PEDIA 251	4 weeks	6
MED 251	6 wks	9	REHAB 251	2 weeks	3
NEURO 251	2 wks	3	SURG 251	4 weeks	6
OB-GYN 251	4 wks	6	IDC 205	64 hrs	4
OPHTHA 251	2 wks	3	ELECTIVES	4 wks	6
			TOTAL	40 wks+64 hrs	64

Learning Unit VII – TRACK A (REGULAR ROTATION)					
Subject	No. of Hours	Units	Subjects	No. of Hours	Units
ANESTH 260	1 wk	1.5	ORL 260	2 wks	3
FCH 260	8 wks	12	ORTHO 260	2 wks	3
MED 260	8 wks	12	PEDIA 260	8 wks	12
NEUROSC 260	3 wks	4.5	REHAB 260	2 wks	3
OB-GYN 260	8 wks	12	SURG 260	8 wks	12
OPHTHA 260	2 wks	3	TOTAL	52 wks	72

[1239th BOR meeting, Dec 17 2008]