

# **Accreditation Standards for the MBBS**

**(Bachelor of Medicine and Bachelor of Surgery)**

**Program**

**2017**



**NEPAL MEDICAL COUNCIL**

**Bansbari, Kathmandu, Nepal**

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## Section-A:



# NEPAL MEDICAL COUNCIL



## REGULATIONS FOR UNDER GRADUATE MEDICAL EDUCATION

### MBBS- Program

2017

In exercise of the powers conferred by Nepal Medical Council Act, Third Amendment-2056 B.S., Article-33, Binium-2, The Full House Meeting of Nepal Medical Council held on 21<sup>st</sup> Mangshir-2072, anonymously recommended to amend the existing "**Accreditation Standards for the MBBS (Bachelor of Medicine and Bachelor of Surgery) Program-2013**" and after several discussions with the concerned subject-specialists, experts, medical educationist, representatives of Universities, Academies, Institutions, Ministry of Health and Ministry of Education of Government of Nepal, recommended to amend the existing Guidelines-2013, which was also anonymously passed from the Full House Meeting of Nepal Medical Council held on 18<sup>th</sup> Jestha, 2074 and also recommended to forward these recommendations to the Ministry of Health, Government of Nepal for the amendment/approval. As per the same act, article and Binium-1 of Nepal Medical Council third amendment-2056 B.S., the Ministry of Health, Government of Nepal sanctioned/approved the recommendations forwarded by Nepal Medical Council on Jestha 19, 2074 and has made the following regulations:

**1. Title:**

The regulations are titled as "**Accreditation Standards for the MBBS (Bachelor of Medicine and Bachelor of Surgery) Program-2017**".

**2. Objective:**

The basic objective of these regulations is to ensure quality assurance in *Under-graduate Medical Education* program in Nepal.

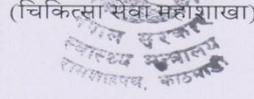
**3. Commencement:**

They shall come into force immediately.



पत्र संख्या: ७२१७४  
चलानी नं.: २४४७

नेपाल सरकार  
**स्वास्थ्य मन्त्रालय**  
(चिकित्सा सेवा महाशाखा)



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रामशाहपथ  
काठमाडौं, नेपाल।

मिति: २०७४।२।२९

श्री नेपाल मेडिकल काउन्सिल,  
बाँसवारी, काठमाडौं।

विषय: Accreditation Standards for the MBBS (Bachelor of Medicine and Bachelor of Surgery)  
Program 2017 स्वीकृत गरीएको।

तहाँ काउन्सिलको च.नं. ७२४ मिति २०७४।०२।१९ को पत्र सम्बन्धमा तहाँ काउन्सिलद्वारा तर्जुमा गरी स्वीकृतिको लागि पेश गरीएको Accreditation Standards for the MBBS (Bachelor of Medicine and Bachelor of Surgery) Program 2017 लाई नेपाल सरकार (माननीय मन्त्रिस्तर) को मिति २०७४।२।१९ को निर्णयानुसार स्वीकृत गरीएको व्यहोरा अनुरोध छ। स्वीकृत गरी प्रमाणित गरीएको १ (एक) प्रति यसैसाथ संलग्न गरी पठाईएको छ।

(रामकृष्ण लामिछाने)  
उपसचिव

# Preface

Considering the respect of a Medical Doctor in the society (from ancient to modern society) and to consolidate, enhance and strengthen this respect, a Doctor must not only be a knowledgeable personal in the field of medical sciences, but also clinically skillful, professionally dedicated, empathic and a continuous research oriented personal.

Moreover, a Medical Doctor must be a sound scholar, professionally enough competent to analyze medical problems critically, lifelong learner; along with leadership qualities, good communication skills, ability to work in a team and having capacity to mobilize the team whenever necessary, community understandable and oriented, health advocate, collaborative and most importantly, socially and ethically responsible towards the patients and members of the society.

In this Revised "Accreditation Standards for MBBS program-2017," emphasis is given to Competency Based Learning, Computer Assisted Learning, Learning in Skill Laboratory and Simulation Based Learning to incorporate all above attributes, to adjust ongoing National, Regional and Global trend in Medical Education and to meet the expectation of patients/people of the society. Likewise, due to the innovations, penetration and utilization of modern technology including information technology in modern medicine, the requirements and criteria which became unrealistic at present time are abolished.

Therefore, the standards which are included herein, we hope, will ensure attainment of satisfactory level of all above attributes, expected from the modern medical graduates and will be easily salable not only within the territory of the Nation but also in the Regional and Global market.

**Prof. Dr. Dharma Kanta Baskota**  
Chairman, Nepal Medical Council  
Bansbari, Kathmandu

## SECTION-B:

### 1. Conceptual framework:

Nepal has made significant progress in assuring quality of medical education. This, in turn, has contributed to the enhancement of the quality of health care services in Nepal. Nepal Medical Council (NMC) remains committed to learning and benefiting from the national, regional and international experiences and best practices.

Nepal Medical Council believes that the valuable lessons learned so far should be incorporated in its guiding principles in order to further improve the quality of medical education in Nepal. In light of the continuing mismatch between health system needs and the responses of medical institutions and the rising public aspiration for better health care, it is imperative that the NMC keeps on taking appropriate measures to address the emerging challenges in the area of quality assurance in medical education in the country.

In this revision NMC has taken into consideration the revised 2012 World Federation of Medical Education (WFME) Global Standards Guideline for quality improvement, as well as recent guidelines recommended by South East Asia Public Health Education Institutes' Network (SEAPHEIN) and South East Asia Regional Association of Medical Education (SEARAME). The Second Long Term Health Plan -2017 (SLTHP-2017) of the Government of Nepal, global policy recommendations of World Health Organization (WHO) for increasing access to health workers in remote and rural areas through improved retention, Global Consensus for Social accountability in Medical Education and other innovations taking place in medical education.

Every country needs to adjust medical education to changing needs in the world but based on reality of the need of the country and the resources available in the country. WFME Guidelines are also flexible in this.

In line with the SLTHP-2017 focus on disparities in healthcare, assuring gender sensitivity and equitable community access to quality healthcare services NMC will facilitate and encourage the medical schools to fulfill these objectives of SLTHP-2017.

As education is the foundation for producing competent health workers, it is therefore important to select the "right" students i.e., those who are more likely to practice in remote and rural areas, and to train them in locations and using methods and curricula that are more likely to influence their future practice location. It is also important to support health workers' need to continue learning throughout their careers. Few of the education related recommendations of global policy documents like selection of students from rural backgrounds, health professional schools outside of major cities, clinical rotations in rural areas during studies, curricula that reflect rural health issues and continuous professional development are incorporated in this revision.

In line with this imperative, the NMC has revised accreditation document to make the underlying principles of the accreditation of undergraduate medical education as objective, coherent, explicit and transparent as possible. The remaining part of this document is devoted to that very end.

The fundamental purpose of medical education is to produce high quality medical practitioners who are willing and able to meet the existing and emerging challenges of the national health care system.

In order to meet this goal all the medical colleges in Nepal should adopt the contemporary global trends and implement innovative approaches in medical education such as SPICES (*Student Centered, Problem Based, Integrated, Community Based, Electives, Systematic*), PBL (*Problem Based Learning*), CPC (*Clinical Presentation Curriculum*) etc. The MBBS curriculum should reflect the core principles advocated by the World Federation for Medical Education (WFME), International Institute of Medical Education (IIME), SEAPHEIN, SEARAME, General Medical Council (GMC)–

UK, Association of American Medical Colleges (AAMC) and the Network of Medical Council of SEAR Countries including Nepal Medical Council. In this revision emphasis is given to utilization of skill lab, Computer assisted teaching learning and Simulation based learning (whenever practicable).

### **Rationale for Revision:**

- Standards should function as a lever for change and reform.
- Standards should be formulated in such a way as to acknowledge national need in the educational program like equity, universal health coverage, rural urban mismatch etc.
- Standards should recognize the dynamic nature of development in the field of medical education i.e. innovations in medical education, utilization of Information Technology in medical field.
- Standards must be clearly defined, and be meaningful, appropriate, relevant, measurable, achievable.
- Standards should be formulated as per national, regional and global need and it must address the undergoing changes of the medical education in the recent world.

## **2. The competencies of the MBBS Graduate :**

Upon completion of the MBBS program including one year of compulsory rotating internship the Medical Graduate, who is to be registered by the NMC as Medical Practitioner, must be competent to:

- 2.1 Take relevant medical history and conduct clinical examination appropriately;
- 2.2 Demonstrate understanding of the principles and practices of modern medicine with sound knowledge of structure and functions of human body in health and disease;
- 2.3 Communicate with patients and their families, colleagues and other members of health care team with respect, politeness and compassion;
- 2.4 Carry out professional responsibilities related to the individual, family, community and society at large with concern and care;
- 2.5 Manage life threatening medical emergencies;
- 2.6 Manage common medical problems appropriately;
- 2.7 Recognize clinical conditions that require referral, give initial treatment and refer to appropriate health care institutions;
- 2.8 Recognize the biological and the social determinants of health of an individual as well as the population;
- 2.9 Plan and manage preventive, promotive, and rehabilitative health programs;
- 2.10 Function as a member of the health care team;
- 2.11 Identify and carry out necessary medico-legal procedures;
- 2.12 Practice the principles of medical ethics; develop professional attitude and behavioral studies including human values.

- 2.13 Acquire new knowledge and skills through continuous professional development;
- 2.14 Appraise published scientific literature critically and engage in research work;
- 2.15 Use medical informatics effectively.
- 2.16 Should be capable of working independently at Primary Health Care Centre (PUCK) level.
- 2.17 Acquire adequate knowledge on patient safety.
- 2.18 Able to teach junior health care professionals periodically and as per need of the working community.
- 2.19 Able to lead, communicate, collaborate and health-advocate as a health sector leader of the community.

### **3. Quality assurance of the MBBS Graduate:**

Since safeguarding the health of the public through ensuring the proper quality assurance of the medical education is its fundamental duty, the NMC shall:

- 3.1 Define the criteria for accreditation of undergraduate medical education program (MBBS).
- 3.2 Execute periodic onsite inspection of the medical colleges to ensure that the defined criteria referred to in 3.1 are adequately met and assess the quality of the program being implemented.
- 3.3 Administer the NMC Licensing Examination (NMCLE) to all medical graduates from within and outside Nepal.
- 3.4 Enroll Continuous Professional Development (CPD) programs regularly to upgrade the existing knowledge, skills and attitude of the medical graduates.

### **4. Overview of the MBBS Program:**

- 4.1 The MBBS program consists of a minimum of four and a half year academic course followed by one year of compulsory rotating internship.
- 4.2 The core curriculum for the MBBS program shall be composed of following pre-clinical and clinical departments (Human Anatomy, Physiology, Biochemistry, Microbiology, Pathology and Pharmacology, Community Medicine, Forensic Medicine, Internal Medicine, General Surgery, Obstetrics and Gynecology, Pediatrics, Orthopedics, Psychiatry, Dermatology, Ophthalmology, Otorhinolaryngology-Head and Neck Surgery, Anesthesiology, Radiology, General Practice and Emergency and Dental Surgery).
- 4.3 The Compulsory Rotating Internship (CRI) shall be of one calendar year as per the NMC guidelines.

**NB:** *In the case of foreign medical students, studying in Nepal, it is requested to all Universities/Institutions/Academies to arrange the internship program as per the requirements/needs of their national medical councils i.e. home country.*

## **5. The Core Curriculum:**

The aim of the core curriculum is to provide a broader framework for universities/academies/medical institutions to develop their own curriculum, defining specific learning objectives together with teaching hours in each discipline. The curriculum should be student-centered, organ system based, integrated within and between basic medical sciences and clinical subjects preferably with the use of community-based and problem-based learning methods.

Considering the innovations, increased number of students, limited access to patients at a time and awareness of patients in recent days, learning on patients should be gradually switched over to Skill lab, Computer assisted teaching learning and Simulation based learning (whenever practicable).

The horizontal integration of basic medical science subjects should be achieved by the concurrent integrated teaching/learning of human anatomy, physiology, biochemistry, pathology, microbiology, pharmacology and community medicine/community health sciences. Vertical integration of basic medical science subjects should be acquired through early clinical exposure.

**Such a curriculum should encompass the following components:**

### **5.1 Scientific foundation of medicine:**

The medical graduate must demonstrate knowledge and understanding of:

- 5.1.1 The normal structure and functions of the human body;
- 5.1.2 Abnormalities in body structures and functions which occur in diseases;
- 5.1.3 Regulation of body functions, homeostasis and biochemical aspects.
- 5.1.4 The human life cycle and effects of growth, development and aging upon the individual, family, and community.
- 5.1.5 The etiology and natural history of acute illnesses and chronic diseases.
- 5.1.6 Laboratory or other investigations that facilitate the ability to make accurate quantitative observations of biomedical phenomena and critical analysis of data;
- 5.1.7 Symptoms and signs of diseases, investigations, diagnoses, differential diagnoses; non-pharmacological and pharmacological management of diseases;
- 5.1.8 Management of emergencies;
- 5.1.9 Therapeutics, adverse reactions of therapy, curative and palliative therapy;
- 5.1.10 Disability, handicap and rehabilitation;
- 5.1.11 Record keeping and death audit;
- 5.1.12 Behavioral science and relationship to medical anthropology, sociology and basic psychology;

- 5.1.13 Educational principles underlying learning and continuing medical education;
- 5.1.14 Ethics and legal aspects in relation to practice of medicine;
- 5.1.15 Principles of communication;
- 5.1.16 Role of family and interrelationship and interaction with society;
- 5.1.17 Cultural and ethnic differences about perceptions and response to illness.

## **5.2 Clinical Skills:**

The medical graduate must be able to:

- 5.2.1 Take relevant history from patients, their relatives or accompanying persons;
- 5.2.2 Perform systemic physical examinations;
- 5.2.3 Identify problems and formulate differential diagnoses on the basis of history and clinical examination;
- 5.2.4 Advise specific investigations and interpret results;
- 5.2.5 Make clinical decisions based on evidence and findings;
- 5.2.6 Plan patient management and acquire adequate knowledge on patients' safety.
- 5.2.7 carry out required practical and technical procedures;
- 5.2.8 Institute advanced life support measures;
- 5.2.9 Demonstrate other core skills and competencies as required by the national health policies, e.g. for Skilled Birth Attendant.

## **5.3 Communication Skills:**

The medical graduate should acquire core communication skills including those required in special circumstances and must be able to:

- 5.3.1 Listen attentively to patients, their relatives or other accompanying persons;
- 5.3.2 Explain medical concepts and conditions in simple and plain language easily understood by the lay persons, and convey information about the health problems and their management plan;
- 5.3.3 Take consent of patients and their relatives or responsible persons whenever necessary;
- 5.3.4 Handle complaints appropriately;
- 5.3.5 Listen to other members of the health care team;
- 5.3.6 Deal with bereavement and grief sympathetically;
- 5.3.7 Be polite, kind and compassionate with patients, their relatives and others; and handle special situations such as breaking bad news etc.

#### **5.4 Leadership skills:**

The medical graduate should acquire basic leadership skills including those required in special circumstances and must be able to:

- 5.4.1 Lead the community to identify the existing health problems of the community;
- 5.4.2 Identify the community leaders and collaborate them to solve existing health problems of the community;
- 5.4.3 Advocate the health issues of the community and address them on right time and to right place;
- 5.4.4 Appropriately manage mass casualties and casualties during natural calamities and disaster, utilizing the local available resources.

#### **5.5 Population Health and Health Systems:**

The medical graduate must understand her/his role in protecting and promoting the health of the whole population and be able to take appropriate action. Graduates should understand the principles of health systems organization and their economic and legislative foundations of those systems. Graduates should also have a basic understanding of the efficient and effective management of healthcare systems.

The medical graduate should be able to demonstrate:

- 5.5.1 Knowledge of important genetic, demographic, environmental, lifestyle, social, economic, psychological, and cultural determinants of health and illness of a population as a whole;
- 5.5.2 Knowledge of her/his role and ability to take appropriate action in disease, injury and accident prevention and protection, and maintain and promote the health of individuals, families and community;
- 5.5.3 Knowledge of Global Health and international health status, global trends in morbidity and mortality of chronic diseases of social significance, the impact of migration, trade, and environmental factors on health, and the role of international health organizations;
- 5.5.4 Acceptance of the roles and responsibilities of other health and health-related personnel in providing healthcare to individuals, populations and communities;
- 5.5.5 An understanding of the need for collective responsibility for health-promoting interventions which require partnerships with the population served, and a multidisciplinary approach including healthcare professions as well as intersect oral collaborations;
- 5.5.6 An understanding of the basics of health systems including policies, organization, financing, cost-containment measures of rising healthcare costs, and principles of effective management of healthcare delivery;
- 5.5.7 An understanding of the mechanisms that determine equity in access to healthcare, effectiveness, and quality of care;

- 5.5.8 Use of national, regional and local surveillance data, as well as demography and epidemiology in health decisions; and
- 5.5.9 Willingness to accept leadership when needed and as appropriate in health issues.
- 5.5.10. Ability to understand and apply demography, vital statistics, basic and applied epidemiology, basic statistics as applied to medicine, epidemiological methods, health education, environmental health, community health, needs assessment, health care planning, health care management and health economics, organizations of curative and preventive health services, health care provisions and disaster management and international health.

## **5.6 Information Management:**

The medical graduate must be able to:

- 5.6.1 Acquire basic knowledge of computer and internet;
- 5.6.2 Search, collect, organize and interpret health and biomedical information from different data base and sources;
- 5.6.3 Retrieve patient –specific information from clinical data system;
- 5.6.4 Use information and communication technology to assist in diagnostic, therapeutic and preventive measures and for surveillance and monitoring health status;
- 5.6.5 Understand the application and limitations of information technology; and
- 5.6.6 Maintain records of patients under her/his care for future use and medico-legal purposes.
- 5.6.7 Be able to learn in self-directed manner with the help of computer assisted teaching learning material

## **5.7 Critical Thinking and Research:**

The medical graduate must be able to:

- 5.7.1 Possess the ability to critically evaluate information and use reasoning and personal judgment;
- 5.7.2 Understand scientific research methods and their limitations; and
- 5.7.3 Cope with uncertainty and error in decision making.

## **5.8 Professional values, attitudes, behavior and ethics:**

The medical graduate must:

- 5.8.1 Possess essential elements of the medical profession including moral and ethical principles and legal responsibilities underlying the profession;

- 5.8.2 Possess professional values, responsibilities, compassion, empathy, accountability, honesty, integrity and human values;
- 5.8.3 Recognize good medical practice, doctor- patient relationship, patients' welfare, and respect for colleagues and other health care professionals;
- 5.8.4 Recognize the moral obligation to provide end-of- life care, including palliation of symptoms.
- 5.8.5 Recognize ethical and medical issues in patient documentation, confidentiality and ownership of intellectual property;
- 5.8.6 Have the ability to plan effectively and manage efficiently one's own time and activities to cope with uncertainty and have the ability to adapt to change; and
- 5.8.7 Take personal responsibility for the care of individual patients.

## **6. Teaching-Learning Methodology:**

While seeking assurance of the quality of medical graduates without interfering with the academic autonomy of the individual universities/academies/institutions, the NMC expects the medical colleges to implement innovative teaching methodology replacing the traditional teacher-centered with student-centered teaching-learning including but not limited to:

- 6.1 Self- directed- learning to inculcate the habit of life – long learning;
- 6.2 Problem-based learning (PBL);
- 6.3 Structured interactive sessions (SIS) or didactic lectures;
- 6.4 Ambulatory teaching in the outpatient departments for better exposure and understanding of commonly encountered clinical problems;
- 6.5 Experiential training in communication skills and medical ethics;
- 6.6 Acquiring certain clinical examination and procedural skills in a skill laboratory under supervision;
- 6.7 Maintaining log books to document the competencies acquired during practical, clinical placements and community exposures;
- 6.8 Promoting learning in rural community settings (Community Based Learning);
- 6.9 Organ system based integrated teaching learning and early clinical and community exposures; and
- 6.10 Periodic review of basic medical sciences in relation to relevance to common and important clinical problems;
- 6.11 Computer- assisted teaching- learning lab; Skill lab and Simulation based learning (whenever and wherever applicable).

- ***In order to make students learn better, there must be a provision for periodic teacher/faculty trainings on innovations and newer techniques like computer assisted, simulation based learning techniques in medical education trainings and monitoring and assessment of teaching/learning activities under the guidance of a medical education unit/department.***
- ***An annual Academic calendar of operation must be developed and followed strictly.***

## 7. **Assessment of Students:**

- 7.1 The assessment scheme for the MBBS program must match with the methods of instruction.
- 7.2 The learning objectives related to the knowledge, skills, attitude, behavior and professional ethics prescribed in the MBBS curriculum, need to be assessed using appropriate methods of assessment.
- 7.3 The specific modalities and number of formative and summative assessments including numbers of examiners shall be determined by the concerned Universities/Academies/Institutions.
- 7.4 The maximum number of candidates to be examined in Final Clinical/Practical and Oral examination on any day shall be as per University/Institution/Academy regulation. However, the maximum number of candidates to be examined in clinical/practical/oral, on any day shall not exceed twenty for any undergraduate program.

## 8. **Criteria for admission to the MBBS Program:**

### 8.1. **Eligibility Criteria:**

To be considered eligible for selection to the MBBS program, a candidate:

- 8.1.1 Must have passed 10 + 2 or equivalent qualifications recognized by universities/boards with physics, chemistry, and biology (PCB) securing a minimum of 50% in each PCB subject and also in aggregate (***implemented from June 17, 2011. Prior to this date, a minimum 50% aggregate mark in physics, chemistry and biology was also accepted and that was implemented from June 22, 2008).***

Or

Must have passed Bachelor of Science (B.Sc.) degree recognized by the universities in Nepal with biological sciences and must have passed one of

- Higher Secondary Education (Science); 10+2 (Science);
  - Intermediate of Science (I.Sc);
  - Cambridge University 'A' level with Biology, Physics, and Chemistry securing a minimum of 50% (equivalent) in each subject.
  - Or equivalent Science education with Biology, Physics, and Chemistry.
- 8.1.2 Must have passed in the specific Medical Entrance Examination (MEE) of the University/Academy/Institution of Nepal where admission to the MBBS program is sought by the candidate and it ***must be on merit basis.***

- 8.1.3 Criteria should be developed by the Universities/Academies/Institutions for recruitment of students from the rural and marginalized areas as well.
- 8.1.4 Students going to foreign countries to study medical course must get the eligibility certificate from NMC and must have passed any one of the Medical Entrance Examinations required by the Nepalese students for admission in Nepal (**Implemented from February 1<sup>st</sup>, 2016**).

## 8.2 Selection of students:

8.2.1 **For Nepalese students:** Eligible candidates desirous of pursuing MBBS program must take and pass the specific Medical Entrance Examination, conducted by the respective University/Academy/Institution of Nepal or National Common Entrance Test and should qualify by fulfilling University criteria; however, NMC can review the policy if the situation demands in order to maintain quality of medical education.

8.2.2 **For International students:** Eligible candidates desirous of pursuing MBBS program must take and pass the specific MEE conducted by the respective University/Academy/Institution of Nepal and should qualify by fulfilling University criteria.

or

- Candidates should present valid document of passing recent National/State Medical Entrance Test of their country of origin.

or

- Passing SAT (Scholastic Aptitude/Assesment Test) with minimum 1440 score, to get the motivated and academically sound students.
- However, the international candidate must have passed 10 + 2 or equivalent qualifications recognized by universities/boards with physics, chemistry, and biology (PCB) securing a minimum of 50% in each PCB subject and also in aggregate. The validity of these tests is for two academic years only. Nepal Medical Council can review the policy if the situation demands in order to maintain quality of medical education.

## 8.3. Commencement of the Undergraduate programs:

Nepal Medical Council strongly recommends to all University/Institution /Academy that the academic session of all Undergraduate programs and Specialty/Subspecialty Postgraduate programs shall start from the same date in all University/Institution/Academy throughout the country, so that the council could organize the Licencing Examination and Subspecialty/Specialty registration examinations immediately after the completion of these academic programs, considering that all medical graduates, specialists and subspecialists could serve the people of the nation as a Medical graduates/ Specialist/Subspecialist immediately without any gap.

### Recommended dates to start Undergraduate programs:

15 October (~ 2<sup>nd</sup>Kartik) for Undergraduate programs (MBBS/BDS)

### Recommended dates to start Postgraduate programs:

15 April (~2<sup>nd</sup> Baisakh) for Postgraduate Master programs (MD/MS/MDS)

15 October (~ 2<sup>nd</sup>Kartik) for Subspecialty Postgraduate programs (DM/MCh)

## **9. Faculty Requirement for different departments:**

The role and responsibilities of faculty in running the MBBS program is considered to be of utmost importance. The numbers of faculty required in different departments have been determined in a composite way on the basis of the following:

- 9.1. The total number of teaching hours in each of the subjects contained in the existing MBBS curricula.
- 9.2. The total number of student admission annually.
- 9.3. The number of hospital beds and units in each clinical department will depend on the need of academic programs and hospital services; however, for the purpose of ensuring adequate learning of the medical students the organization of units and beds are given in table 1.
- 9.4. Since the discipline of Community Medicine/Community Health Sciences consists of various components (Biostatistics, Sociology/Behavioral Sciences, Environmental Health, Health Education, Epidemiology, Demography and Family Health) the faculty of Community Medicine/Community Health Sciences must comprise of individuals with adequate expertise in the areas mentioned above.
- 9.5. Tutor/Demonstrator/Instructor with MBBS or equivalent degree may be appointed as required in each of the basic science departments to assist faculty members in practical/demonstrations. However, they will not be counted as the faculty.

### **An unit of a clinical department shall be composed of the following:**

- a) **Professor- one,**
  - b) **Associate Professor/Reader- one and**
  - c) **Assistant Professor/Lecturer- one.**
- or**
- a) **Professor/Associate Professor/Reader– one and**
  - b) **Assistant Professor//Lecturer– two.**

Senior Resident/Registrar/Teaching Assistant/ Clinical Tutor/House Officer as required.

Though the Senior Consultant/Consultant/Senior Registrar/Registrars are hospital positions for providing clinical services in the hospital, they may be accepted for clinical teaching of undergraduate medical students. But they will not be counted as teaching faculty for allocation of seat.

All faculties must be approved and renewed annually by the concerned University/Academy/Institution authorities and registered with the Nepal Medical Council or with other professional council, wherever applicable.

All the heads of the departments should be a Professor/ or an Associate Professor.

### **9.6. Eligibility criteria for faculty:**

All faculty appointments must be according to the rules of the concerned University/Academy/Institution. All affiliated institutions must have the teaching faculty approved by the parent University/Academy/Institutions as well as by Nepal Medical Council.

## **Nepal Medical Council approves faculties under two broader headings:**

- i) With MD/MS/MDS or equivalent degrees after MBBS or BDS degrees.
  - ii) With Master degree/PhD in Clinical or Medical or Human Sciences.
- 9.6.1 All MBBS/BDS personnel must possess a basic university postgraduate degree (MD/MS/MDS) or equivalent qualifications in the relevant discipline in order to be eligible to become a faculty member. They should also have specialist registration with the Nepal Medical Council, prior to joining the faculty position.
- 9.6.2 All Personnel with other than MBBS/BDS or equivalent degrees must possess a Master degree/PhD in Clinical / Medical / Human sciences for the enrolment of initial faculty position. But to become Associate Professor/Reader, it is mandatory to possess Ph.D. in the appropriate discipline.
- 9.6.3 Age of the faculty should not be more than 73 years in clinical disciplines and 75 years in Dental/Basic sciences disciplines. But after 70 years, approval of faculties will be provided only after assessment of physical fitness of the faculties by NMC. This provision will remain till 2024. Thereafter, maximum age of the faculty should not be more than 70 years, in both clinical/dental and basic sciences disciplines.
- 9.6.4 Foreign faculties are allowed to do only hospital based practice within the premises of Teaching hospital and satellite centres of allocated medical college. They are not allowed to do private practice neither in any other medical college – hospitals nor in any other hospitals.

## **9.7 Designation of the faculty and their criteria:**

The nomenclatures of the designation for faculty positions are:

- **Professor**
- **Associate Professor/Reader**
- **Assistant Professor:(KU,BPKIHS,NAMS,PAHS) /Lecturer:(TU)**
- **Lecturer (KU,BPKIHS,NAMS,PAHS)/Assistant Lecturer/Teaching Assistant(TU)**

***NB: The Nepal Medical Council strongly recommends that the designation/nomenclature of the faculties should be uniform among all the Universities/Academies/Institutions throughout the country as early as possible.***

### **Basic requirement of undergraduate faculty:**

All affiliated institutions must have the teaching faculty appointment approved by the parent University/Institution/Academy. Similarly, the academic qualifications required for faculty position will be according to the rules and regulations of the University/Institutions/Academy.

Visiting faculties are not counted for the allocation of (seat) in any undergraduate program. They may be appointed for the upliftment of overall academic standard and betterment of the training institution.

Basic requirements and broad principles for appointment of faculties with medical qualifications to different levels are as follows:

**Professor:**

1. Should have DM/MCh or Doctorate(after MBBS) or Postgraduate Master degree(MD/MS) or equivalent qualification in the respective subject or specialty from University/Institution/Academy, recognized and registered by the Nepal Medical Council, together with teaching/working experience of minimum **five** years as Associate Professor/Reader or equivalent post. But the total duration of service counted under different faculty appointments held should not **be less than ten years** for becoming eligible for the post of Professor **and**
2. Should have minimum of two research/original researches as main author and two other publications in national/international indexed/peer reviewed scientific journal as main/co-author at the level of Associate Professor.

**Associate Professor/Reader:**

1. Should have DM/MCh or Doctorate (after MBBS) or Postgraduate Master degree (MD/MS) or equivalent qualification in the respective subject or specialty from University/Institution/Academy, recognized and registered by the Nepal Medical Council, together with teaching/working experience of minimum three years as Assistant Professor and another two years as Lecturer (KU, PAHS, BPKIHS, NAMS) or five years teaching/working experience as Lecturer (TU) or equivalent post. But the total duration of service counted under different faculty appointments held should not **be less than five years** for becoming eligible for the post of Associate Professor/Reader **and**
2. Should have minimum of two research/original researches as main author and two other publications in national/international indexed/peer reviewed scientific journal as main/ co-author at the level of Assistant Professor(KU,PAHS,BPKIHS,NAMS)/Lecturer (TU).

**Assistant Professor (KU, PAHS, BPKIHS, NAMS)/Lecturer (TU):**

1. Should have DM/MCh or Doctorate (after MBBS) or Postgraduate Master Degree (MD/MS) or equivalent qualification in the respective subject or specialty, from University/ Institution/ Academy recognized and registered by the Nepal Medical Council, together with teaching/working experience of minimum two years as Lecturer for (KU, PAHS, BPKIHS, NAMS), where as for TU it should be at the level of Assistant Lecturer/Teaching Assistant **and**
2. Should have minimum of two research/original researches, published as main author in national/international indexed/peer reviewed scientific journal at the level of Lecturer (KU, PAHS, BPKIHS, NAMS) and at the level of Assistant Lecturer/Teaching Assistant (TU).

**Lecturer (KU, PAHS, BPKIHS, NAMS)/ Assistant Lecturer/Teaching Assistant (TU):**

Should have Postgraduate Master Degree or equivalent qualification in the respective subject or specialty from University/ Institution/ Academy, recognized and registered by the Nepal Medical Council.

**Note:**

- 1) Research and publications already considered for the previous post shall not be taken into consideration.
- 2) Case reports, case series and book review are not counted as a research article.
- 3) For the entry faculty position, requirement of publication is not mandatory.

### Criteria for Visiting Faculty:

- The posts of Professor Emeritus and Visiting Faculty may be conferred upon the teaching faculties holding posts in other University/Institutions/Academy.
- The same criteria which are applicable for appointment of regular Undergraduate faculties will be also applicable to the visiting faculties.
- The Visiting Faculty title may be awarded to a teacher involved in teaching/training of the Undergraduate program run by the University/Institution/Academy provided the candidate fulfills the following criteria:
  1. Requirement of academic qualifications, teaching/working experiences and publications: as per regular faculty position, recognized by the Nepal Medical Council.
  2. The appointment should be institution specific and be time limited.
  3. In case, the Visiting Faculty is no longer involved in the teaching/training program of the institution or is transferred to another institution, this title should be automatically cancelled.
  4. **Visiting faculties are not counted for the allocation of seat in undergraduate program, i.e. enrolment of undergraduate students.** They may be appointed for the upliftment of overall academic standard and betterment of the training institution.

### 9.8. Minimum Faculty requirements in Basic Medical Sciences and Clinical Sciences for Annual Intake of 50, 75, 100 and 150 Students for MBBS program in all Universities/Academies/ Institutions of Nepal.

#### A) Basic Sciences:

Subject	Max. no of student intake	Professor	Associate Professor/Reader	Ast. Prof. /Lecturer	Total
ANATOMY	150	1	1	3	5
	100	1	1	2	4
	75	2		2	4
	50	1		2	3
Maximum of one faculty can have MSc Clinical/Human/Medical Anatomy or equivalent degree. Rest of the faculties needs to Have MD/MS Anatomy or equivalent degree.					
PHYSIOLOGY	150	1	1	3	5
	100	1	1	2	4
	75	2		2	4
	50	1		2	3
Maximum of one faculty can have MSc Clinical/Human/Medical physiology or equivalent degree. Rest of the faculties needs to Have MD physiology or equivalent degree.					

<b>BIOCHEMISTRY</b>	150	1	1	3	5
	100		2	2	4
	75		2	2	4
	50		1	2	3
Maximum of one faculty can have MSc Clinical/Human/Medical Biochemistry or equivalent degree. Rest of the faculties needs to Have MD Biochemistry or equivalent degree.					
<b>MICROBIOLOGY</b>	150	1	1	3	5
	100		2	2	4
	75		2	2	4
	50		1	2	3
Maximum of one faculty can have MSc Clinical/Human/Medical Microbiology or equivalent degree. Rest of the faculties needs to Have MD Microbiology or equivalent degree.					
<b>PATHOLOGY</b>	150	1	1	4	6
	100	1	1	3	5
	75		2	2	4
	50		1	2	3
<b>PHARMACOLOGY</b>	150	1	1	3	5
	100		2	2	4
	75		2	2	4
	50		1	2	3
Maximum of one faculty can have MSc Clinical/Human/Medical pharmacology or equivalent degree. Rest of the faculties needs to Have MD pharmacology or equivalent degree.					
<b>COMMUNITY MEDICINE</b>	150	1	1	4	6
	100	1	1	3	5
	75		2	2	4
	50		1	2	3
<b>FORENSIC MEDICINE</b>	150	1	1	2	4
	100	0	1	2	3
	75	0	1	1	2
	50	0	0	2	2

### B) Clinical Sciences:

Subject	Max. no of student intake	Professor	Associate Professor/Reader	Ast. Prof. /Lecturer	Total
<b>MEDICINE</b>	150	1	2	5	8
	100	1	2	4	7
	75	1	1	4	6
	50		2	3	5

<b>SURGERY</b>	150	1	2	5	8
	100	1	2	4	7
	75	1	1	4	6
	50	2		3	5
<b>OBSTETRICS AND GYNECOLOGY</b>	150	1	2	5	8
	100	1	1	4	6
	75	1	1	3	5
	50	2		2	4
<b>PEDIATRICS</b>	150	1	1	4	6
	100	1	1	3	5
	75	1	1	2	4
	50	2		2	4
<b>ORTHOPEDICS</b>	150	1	1	3	5
	100	1	1	2	4
	75	2		2	4
	50	1		2	3
<b>ENT-HEAD &amp; NECK SURGERY</b>	150	1	1	2	4
	100	1		2	3
	75	1		2	3
	50	1		2	3
<b>OPHTHALMOLOGY</b>	150	1	1	2	4
	100	1		2	3
	75	1		2	3
	50	1		2	3
<b>RADIOLOGY</b>	150	1	1	4	6
	100	1	1	3	5
	75	2		2	4
	50	1		2	3
<b>ANAESTHESIA</b>	150	1	1	4	6
	100	1	1	3	5
	75	2		2	4
	50	1		2	3
<b>DERMATOLOGY</b>	150	1	1	2	4
	100	1		2	3
	75	1		2	3
	50	1		1	2
<b>PSYCHIATRY</b>	150	1	1	2	4
	100	1		2	3
	75	1		2	3
	50	1		1	2

<b>GENERAL PRACTICE AND EMERGENCY MEDICINE</b>	150	1	1	3	5
	100		1	3	4
	75		1	2	3
	50		1	1	2
<b>DENTAL</b>	150	0	1	2	3
	100	0	1	1	2
	75	0	1	1	2
	50	0	1	1	2
<b>Medical Education</b>	1. Coordinator/HOD: Principal or Coordinator or HOD or faculty of any Basic sciences or Clinical departments or expert in medical education—1. 2. Members: Faculty that may belong to other departments having interest and adequate exposure in medical education—2.				

● **Requirement of Bed Occupancy and Number of patients in Out Patient Department:**

<b>No of student intake</b>	<b>Bed Occupancy</b>	<b>OPD Patient</b>
150 Students	60%/*50%	750
100 Students	60% /*50%	500
75 Students	60%/*50%	375
50 Students	60%/50%	250

\* 50% bed occupancy is accepted for those medical colleges which are located in the hilly region, geographically difficult to access and their population coverage is minimal.

● **Distribution of beds for intake of 150, 100, 75 and 50 MBBS admission:**

SN	Subject	150 Admission	100 Admission	75 Admission	50 Admission
1	Internal Medicine (Including Sub-specialties)	Total : 150 Beds General beds:110 + ICU/CCU: 30 + 10 beds Dermatology	Total : 110 beds General: 80 + ICU/CCU/HDU: 20 + 10 beds Dermatology	Total: 85 beds General: 60 beds+ ICU/CCU/HDU: 15 beds & 5 beds Dermatology	Total : 70 beds General: 60 beds + ICU /CCU/HDU: 5 & 5 beds Dermatology
2	General Surgery (Including Sub-specialties)	Total : 110 Beds General beds: 100 + 10 Dental Surgery	Total : 80 beds General beds: 70 + 10 beds Dental Surgery	Total: 65 beds General beds: 60 + 5 beds Dental Surgery	Total : 60 beds General:55+ 5 beds Dental Surgery
3	Obstetrics and Gynecology	Total : 120 beds OBG:90+Gynae:30	Total : 90 beds 60 OBG+30Gynae	Total: 75 50 OBG+25Gynae	Total : 60 beds 40 OBG+20 Gynae
4	Pediatrics	Total : 95 beds General Paed:70 + NICU/PICA: 25	Total : 60 beds General Paed: 50 + NICU/PICU:1 0	Total : 50 beds General Paed:45 + NICU/PICA : 5	Total : 40 beds General Paed: 40 + NICU/PICU: 0
5	Orthopedics	90	60	50	40
6	Ophthalmology	20	10	5	5
7	ENT-H & NS	30	20	15	10
8	Psychiatry	30	10	10	5
9	Dermatology	With Int Med	With Int Med	With Int Med	With Int Med
10	General Practice & Emergency	60	30	30	30
11	Dental Surgery	With Gen Surg	With Gen Surg	With Gen Surg	With Gen Surg
12	SICU/Post Op. *	15+30=45	10+20=30	5+10=15	10
	<b>Total</b>	<b>750</b>	<b>500</b>	<b>400</b>	<b>330</b>

\* **SICU+Post Operative beds are counted in General Surgery and other Surgical Specialties**

- Any Department having more than 30 beds should comprise and function with separate Units/Division with at least 20 beds in each Unit/Division.
- There should be 4 subspecialty services: two Medical and two Surgical subspecialties (In Medical Subspecialties: Cardiology, Gastroenterology, Pulmonology, Nephrology, Neurology and in Surgical Subspecialties: Gastroenterology, Urology, Neurosurgery, Cardiothoracic and Vascular Surgery, Plastic Surgery) in the hospital for the medical college admitting 150 students.
- There should be fully functioning 2 subspecialty services: One in Medical and one in Surgical subspecialties (In Medical Subspecialties: Cardiology, Gastroenterology, Pulmonology, Nephrology, Neurology and in Surgical Subspecialties: Gastroenterology, Urology, Neurosurgery, Plastic Surgery, Cardiothoracic and Vascular Surgery.) services in the hospital for the medical college admitting 100 students.
- Medical colleges having medical and dental program should have additional bed as per their requirements and at least one more additional faculty in Basic science and relevant Clinical departments.

***NB: The beds of the medical colleges 'own Satellite Centers or Community Training Centers/Hospitals (District, PHC) can be counted up to 10% in the total number of beds required as per the NMC Accreditation. Of the total area of the Satellite Centre or Community Training Center/ Hospital up to 10% can be counted as a part of the total land requirement, necessary for the medical college, provided the***

***land must be owned by the college. Community training centre should be mandatory as residential facilities and training; however hospital may or may not be there.***

**10. Criteria for opening New Medical College:**

Newly established medical colleges should fulfill all the criteria like having their own infrastructure, hospital (registered in Ministry of Health, Govt of Nepal), faculty, hostel etc. as per the NMC norms from the first day of starting the program. Infrastructure developments should be as per the standard norms prevailing in the country.

**11. The Medical College:**

In addition to fulfilling the requirement for the NMC accreditation to run the MBBS program, the medical college must maintain a good environment for imparting quality medical education in Nepal.

The medical college must have the required number of departments, sections, together with an adequate number of faculty and staff, both administrative and technical.

The head of the college may be designated the Principal/Campus Chief/Dean, as per the nomenclature adopted by the respective universities to which the college/campus is affiliated to, and must be a senior faculty of Medical background and meet the appointment criteria outlined by the affiliating University.

Ideally, all the activities related to the academic program other than community training should be located at the same site. However, for those colleges which have physical infrastructure at geographically separated locations, or have already made arrangement to send students to different hospitals or health institutions for acquiring clinical/ community experiences, care should be taken to ensure that the students are not physically exhausted by commuting. Appropriate accommodation must be arranged for students during teaching-learning activities.

All the medical college hospital should have a community training centre, computer assisted and e-learning/ teaching learning facilities, skills laboratory and ambulatory teaching learning facilities in clinical departments.

**11.1. At the start all medical college should have the following requirements fulfilled:**

- Minimum 300 bedded functional general hospital which is continuously in operation for three years: registered in Ministry of Health, Govt of Nepal
- Community Training Centre (CTC) with adequate facilities.
- Computer -assisted teaching- learning and e-learning facilities.
- Well equipped skill laboratory(minimum content of skill lab is given in Anex: 1)
- Simulation based learning facility
- Classrooms for self-directed teaching learning, one for 10 to 15 students.
- Ambulatory teaching learning facilities in each clinical department.

### **11.2. Criteria for increment of existing MBBS intake for a Medical College:**

- All criteria laid down by NMC/University/Academy for allocated seats must be fulfilled.
- Must abide by Rules and regulations of NMC/University/Academy.
- Well maintained yearly academic calendar.
- Outstanding academic performance (Result pass out =>75%).
- All dues of NMC/University/Academy paid on time.
- All infrastructures for increment number of seats must be well established as per NMC guidelines on top of provided seats.
- Adequate number of faculties for increment number of seats must be recruited in advance as per NMC guidelines.
- Must be completed three academic calendars after start of the medical college with good faith.

### **11.3. For running the MBBS program the following departments are required:**

1. Human Anatomy
2. Physiology
3. Biochemistry
4. Pathology
5. Microbiology
6. Pharmacology
7. Community Medicine
8. Forensic Medicine
9. Internal Medicine
10. General Surgery
11. Obstetrics and Gynecology
12. Pediatrics
13. Orthopedics
14. Ophthalmology
15. Otorhinolaryngology-Head and Neck Surgery
16. Psychiatry

17. Dermatology
18. Dental Surgery
19. Radiology
20. Anesthesiology
21. General Practice and Emergency
22. Medical Education

**11.4. The administrative structure of the Medical College/Campus should comprise the following sections:**

1. General and Personnel Administration
2. Fiscal and Internal Auditing
3. Planning and Evaluation
4. Academic and Examination
5. Procurement and Store
6. Learning Resources including Audio-visual and Medical Illustration
7. Students' Welfare including Hostel and Extra- curricular activities
8. Property, Security, Transport and Repair and Maintenance
9. Research and Publication
10. Waste Management

**11.5. General and Personnel Administration section:**

All matters related to general and personnel administration of the college/campus should be looked after by this section.

**11.6. Fiscal and Internal Audit Section:**

The fiscal section should be responsible for the financial planning and management of the medical college/campus. A strong financial commitment must be ensured for the sustainability of the institution. An internal audit section must check and report on the budget, procurement, and store inventory according to the financial rules and regulations pertaining to the colleges/campus.

**11.7. Planning and Evaluation Section:**

This section should conduct annual planning, budgeting and annual program evaluation.

**11.8. Academic/Examination Section:**

The academic and examination section should look after the academic programs and prepare the academic calendar. An annual/semester academic calendar of operation for all years / semesters must be prepared by

the college/school/institute/campus specifying the details of teaching schedules of theory, practical/clinical teaching/learning activities.

This section should also ensure that the examinations are held effectively, efficiently and confidentially and the results of the examinations are published in a timely manner and feedback given to individual students.

#### **11.9. Procurement and Store Section:**

All matters related to the procurement and store is carried out by this section.

#### **11.10. Learning Resources Section:**

##### **11.11.1 Library:**

A Central library with good ventilation and lighting must provide sufficient space with comfortable sitting arrangements for allowing double the number of annual admissions of students to sit and study at any given point in time.

For the core text books recommended by the curriculum there must be at least one book for every five students in the class. In addition, there must also be adequate numbers of reference books (1 book for every 20 students) which are to be placed in the reference section and/or departmental libraries.

A good number of national/international medical journals related to all subjects either in paper or in digital form must be available.

Medical Colleges/Campuses must provide free e-library/e-learning and internet services to the faculty and students. The Central library should remain open preferably twenty-four hours a day, to provide the opportunity to learn during any hour of the day or night.

The Central Library must have an adequate number of personnel with relevant skills and expertise to provide library services as mentioned above.

##### **11.11.2 Audio-visual and Medical Illustration Section:**

An Audio-visual and Medical Illustration Section must be established to provide sufficient numbers of overhead projectors, multimedia, laptop, television and artist facilities for helping teachers to teach effectively and students to learn better. The colleges/campuses are encouraged to continuously adapt to new and innovative technologies for fostering effective teaching /learning activities.

##### **11.11.3 Lecture Rooms:**

Adequate number of lecture halls with comfortable sitting arrangements together with good ventilation, lighting, acoustic system and audio-visual aids should be made available for carrying out teaching/learning activities effectively. Tutorial Room for 1:10-15 students.

##### **11.11.4 Examinations Hall:**

The academic/examination section must ensure that all examinations are held properly by maintaining the examination norms of the respective University. Sitting arrangements may be made in a separate examination hall or in classrooms with adequate invigilation.

#### **11.11.5 Auditorium:**

Medical college/campus/school must have an auditorium of adequate capacity for holding scientific and other activities.

#### **11.11.6 Students' Welfare including Hostel and Extra-curricular section:**

The students' Welfare Section should look after the welfare of the students including providing hostels and extracurricular activities. Students' hostel for both female and male must provide adequate accommodation of adequate standard. (Hostel facility for at least 75% students).

Hostels should be on the campus or in close vicinity for maximum use of library and participation in clinical learning activities, including off time hospital exposure for patient care and management.

#### **11.11.7 Property, Security and Transport & Repair and Maintenance Section:**

The safety of the college/campus physical property and students, faculty and staff must be ensured by the property section by providing adequate security. The transport of staff and students is to be organized through the transport section. All matters related to the repair and maintenance of all infrastructures, electrical and sanitary and all others are looked after by the section.

#### **11.11.8 Research and Publication:**

A Medical College/Campus must establish a Research, Ethical and Publication Unit/ section/department and must show evidences of research and publication by the faculty must be evident by the time the first batch of students pass out of the college/campus.

***To facilitate the research activities of the medical college/hospital and to facilitate statistical part of thesis of the postgraduate residents, employment of a biostatistician is mandatory for every medical college.***

### **12. The Teaching Hospital:**

12.1 The teaching hospital of a medical college/ campus/ school should run under a medical director who should be faculty of the medical college.

12.2 In order to widen the clinical and community field experiences, the medical colleges are encouraged to adequately expose their medical students to other hospitals and rural community settings in addition to clinical placements at the institutions' own teaching hospital. However, the beds of those hospitals other than the community centers hospitals (District, PHC) which are adopted by the colleges will not be counted towards fulfillment of the NMC requirements.

12.3 In the case of those medical colleges/campus/schools/institutions/ either constituent or affiliated to a University, which have already been granted permission by Nepal Government to use government hospitals for running the MBBS program, a memorandum of understanding (MOU) must be signed between the Medical School/Institute/College/Campus and the management of the concerned Government Hospital. Appropriate faculty positions for the Senior Consultants, Consultants and Registrars working in those hospitals should be awarded as per university faculty norms. The commitment of such faculty must be obtained in writing for their involvement in and contribution to the teaching learning activities of the medical students throughout the MBBS program. The MOU and the

undertaking signed by the individual faculty members must be produced before Nepal Medical Council to ensure the environment and spirit of collaboration and cooperation between the Medical School/Institute/College and the Government hospital for academic activities. The academic calendar and other related documentation should be in place.

- 12.4 The most important aspect of clinical teaching is to identify the learning objectives for different semesters/years by the concerned departments and their strict implementation of those objectives through fixed clinical placements schedules. In addition to acquiring basic insight into the disease manifestation and response to therapy, hands on skill development either on peers, mannequins or real patients under adequate supervision of the faculty/Senior Residents must be the core activity during the clinical rotations. It is also crucial to provide the students with timely feedback on their learning and performance. This will, among other things, provide the students an opportunity to realize their deficiencies and sharpen their clinical skills.
- 12.5 A fixed time table together with the clinical topics allocated for daily teaching either in wards or OPD must be clearly written in the attendance register of clinical teaching in every department.
- 12.6 Ambulatory teaching at OPD is to be scheduled in teaching-learning activities as ample common clinical materials are available in the OPD. Hence a separate OPD teaching/demonstration room is required for all departments of the teaching hospitals.
- 12.7 In the case of those medical colleges/campus/schools/institutions/ either constituent or affiliated to a University, which have already been granted permission by Nepal Government to use government hospitals for running the MBBS program, a memorandum of understanding (MOU) must be signed between the Medical School/Institute/College/Campus and the management of the concerned Government Hospital. However, the beds of these hospitals and the community centers hospitals (District, PHC) which are adopted by the colleges will be counted towards fulfillment of the NMC requirements.

### **13. Human Resources:**

The following are the list of sections desirable to run the academic program and hospital services of the medical campus/school/college/institute and teaching hospital.

1. Principal/Dean/Campus Chief's office
2. Hospital Directors Office
3. Academic/Examination Section
4. Administration Section
5. Fiscal Section
6. Public Relation Office
7. Transportation Section
8. Library
9. Centre for Medical Informatics

10. Medical Record Unit
11. Property Section
12. House Keeping Section
13. Security Section
14. Kitchen Section
15. Accommodation/Hostel Section
16. Medical Illustration Section
17. Bio-Medical Engineering Section
18. Planning and Evaluation Section
19. Audit Section
20. Medical Education Department/Unit
21. Community Health Satellite Centre
22. Research Unit
23. Procurement Section

For the effective management of the academic activities and the clinical services, the management of the academic side and the service side may be looked after by separate administrations of the college/campus/school side and the teaching hospital or may be amalgamated into one, as per the decision of the individual college/campus/institute. Likewise, staff recruitments in different positions shall be as per the needs of individual college/campus/school/institute and the teaching hospital.

## 14. Licensing Examination:

*(Implemented from March 1<sup>st</sup>, 2001=Falgun 18, 2057)*

After completion of MBBS/BDS course, every medical graduate must have to appear in the licensing examination, conducted by Nepal Medical Council. Candidates who are enrolled in University/Academy/Institution and completed minimum six months of their compulsory rotatory internship can appear in the licensing examination. Nepal Medical Council "Registration Certificate" will be provided to only those candidates who will pass the licensing examination and complete full one year compulsory rotatory internship either from Nepal or abroad. ***(Edited decision on 2075/07/15 NMC Full House and MOHP approved on 2075/07/30)***

For the reference, followings are the composition and question pattern of Licensing Examination which is not constant and may change on time to time.

### ***Aims and objectives of questions of Licensing Examination:***

- MCQs to evaluate the range of knowledge of subject specialty.
- CSQs to evaluate the depth of knowledge of subject specialty.

### **B. Subject wise MCQs 1 mark each (1X130=130):**

<b>Subject</b>	<b>No. of questions</b>
Anatomy	5
Physiology	5
Pharmacology	4
Biochemistry	5
Pathology	7
Microbiology	4
Forensic medicine	6
Community medicine	10
Medicine	13
Surgery	13
Gynecology and Obstetrics	12
Pediatrics	10
Anesthesia	8
Orthopedics	6
Ophthalmology	6
ENT	6
Dermatology	3
Radiology	3
Dentistry	2
Psychiatry	2
<b>Total</b>	<b>130</b>

**C. CSQs 5 marks each (5X10) =50:**

<b>Subject</b>	<b>No. of questions</b>
Pharmacology	1
Medicine	2
Surgery	2
Gynecology and Obstetrics	2
Pediatrics	2
Orthopedics	1
<b>Total</b>	<b>10</b>

**Grand Total Marks of Licensing Examination (130+50) =180**

**NB:** Please note that the information provided over here is to give a hint to candidates appearing licensing examination and does not mean exact distribution in each examination. However, Nepal Medical Council can change the modality of the exam whenever deemed necessary.

## 15. Anex-1: List of content of Skill Laboratory:

**Skill lab of all medical colleges must have all necessary equipment's/contents from which following competencies/skills must be achieved:**

1. Demonstrate and review the use of gowns, gloves, and eye protection when the risk of exposure to body fluids.
2. Demonstrate and review hand hygiene, and surgical hand scrub technique. Also maintaining a sterile field. Nosocomial infections: magnitude and prevention of these infections.
3. Emergency Assessment of Vital Signs.
4. Basic and advanced Life Support (BLS).
5. Cardiac Monitor and Pulse Oximetry.
6. Cervical Spine Immobilization, Hemorrhage Control and Splinting Extremities.
7. Simple Suture.
8. Emergency Assessment.
9. Demonstrate and review proper technique for cardiac exam. Assessment of basic (S<sub>1</sub> and S<sub>2</sub>) sounds and murmurs (systolic, diastolic, S<sub>3</sub> and S<sub>4</sub>) Identify the anatomy of the heart in the transthoracic apical view.
10. Demonstrate and review proper technique for respiratory examination. Assessment and appreciation of normal and abnormal lung sounds.
11. GU (Foley) Catheterization/Pelvic/Rectal/Breast/Testicular Examinations.
12. IV/ Venipuncture.
13. Local Anesthesia/Digital Block.
14. Lumbar Puncture.
15. Oral/Nasogastric Tube/Oral/Nasal Airway (Intubation)/O<sub>2</sub> Delivery Devices.
16. Abnormal ECG Interpretation and Treatment.
17. Basic Trauma Life Support and Trauma Resuscitation.
18. Prostate Examination.
19. Breast Examination.
20. Ear Examination.
21. Ophthalmoscopy.
22. Delivery conduction.
23. Communication Skills, Professionalism: Simulated Patient based.

End

