

# **Accreditation Standards for the MBBS (Bachelor of Medicine and Bachelor of Surgery) Degree Program**



**2013**

**NEPAL MEDICAL COUNCIL**

**Bansbari, Kathmandu, Nepal**

## **Preface**

The doctor of today is expected to attain additional attributes aside from being knowledgeable in the medical sciences and skillful in clinical medicine to succeed and maintain respect in society. In the 21<sup>st</sup> Century, the additional attributes expected of every doctor are leadership abilities, good communication skills, and capacity for good teamwork, community orientation, being socially and ethically responsible towards patients and the public, and being a lifelong learner.

This revised “Accreditation Standards for MBBS” therefore is emphasizing on attaining these additional attributes apart from the basic attributes of sound medical knowledge and adequate clinical skills.

Thus the standards included herein, we hope, will ensure attainment of satisfactory level of all the above attributes expected of the medical graduate.

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## **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. The Nepal Medical Council (NMC) remains committed to learning and benefiting from the national and international experiences and best practices.

The NMC 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. There is a big mismatch in rural and urban human resource for health. Nepal is one among the seven South East Asia Region countries where there is acute human resources crisis in health.

In this revision NMC has taken into consideration the revised 2012 World Federation of Medical Education (WFME) Global Standards Guideline for quality improvement. 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<sup>1</sup>, PBL<sup>2</sup>, CPC<sup>3</sup> etc. The MBBS curriculum should reflect the core principles advocated by the World Federation for Medical Education (WFME), International Institute of Medical Education (IIME), General Medical Council (GMC) – UK, Association of American Medical Colleges (AAMC) and the Network of Medical Council of SEAR Countries including Nepal Medical Council.

<sup>1</sup>SPICES :     *S = Student Centered;*            *P = Problem Based;*     *I = Integrated;*  
                  *C = Community based;*            *E = Electives;*            *S = Systematic;*

<sup>2</sup>PBL = *Problem Based Learning*

<sup>3</sup>CPC = *Clinical Presentation Curriculum*

### **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 me 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.
- Standards must be clearly defined, and be meaningful, appropriate, relevant, measurable, achievable.

## **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;
- 2.13 acquire new knowledge and skills through continuous professional development;
- 2.14 appraise published scientific literature critically and engage in research work; and
- 2.15 Use medical informatics effectively.
- 2.16 Should be capable of working independently at Primary Health Care Centre (PHCC) level.

### **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 on site 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 ; and
- 3.3 administer the NMC Licensing Examination (NMCLE) to all medical graduates from within and outside Nepal.

**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 Basic Medical Sciences (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, Anesthesiology, Radiology 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 students internship can be arranged as per the requirements of their national medical councils.*

## **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.

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;
- 5.2.7 carry out required practical and technical procedures;
- 5.2.8 institute advanced life support measures; and

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

5.3.8 handle special situations such as breaking bad news etc.

### 5.4 **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:

- 5.4.1 knowledge of important genetic, demographic, environmental, lifestyle, social, economic, psychological, and cultural determinants of health and illness of a population as a whole;
- 5.4.2 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;
- 5.4.3 knowledge of 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;
- 5.4.4 acceptance of the roles and responsibilities of other health and health-related personnel in providing healthcare to individuals, populations and communities;
- 5.4.5 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 intersectoral collaborations;
- 5.4.6 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;
- 5.4.7 an understanding of the mechanisms that determine equity in access to healthcare, effectiveness, and quality of care;
- 5.4.8 use of national, regional and local surveillance data, as well as demography and epidemiology in health decisions; and
- 5.4.9 willingness to accept leadership when needed and as appropriate in health issues.
- 5.4.10. 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.

5.5 **Information Management:**

The medical graduate must be able to:

- 5.5.1 search, collect, organize and interpret health and biomedical information from different data base and sources;
- 5.5.2 retrieve patient –specific information from clinical data system;
- 5.5.3 use information and communication technology to assist in diagnostic, therapeutic and preventive measures and for surveillance and monitoring health status;
- 5.5.4 understand the application and limitations of information technology; and
- 5.5.5 maintain records of patients under her/his care for future use and medico-legal purposes.

5.6 **Critical Thinking and Research:**

The medical graduate must be able to

- 5.6.1 possess the ability to critically evaluate information and use reasoning and personal judgment;
- 5.6.2 understand scientific research methods and their limitations; and
- 5.6.3 cope with uncertainty and error in decision making.

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

The medical graduate must:

- 5.7.1 possess essential elements of the medical profession including moral and ethical principles and legal responsibilities underlying the profession;
- 5.7.2 possess professional values, responsibilities, compassion, empathy, accountability, honesty, and integrity;
- 5.7.3 recognize good medical practice, doctor- patient relationship, patients' welfare, and respect for colleagues and other health care professionals;
- 5.7.4 recognize the moral obligation to provide end-of- life care, including palliation of symptoms;
- 5.7.5 recognize ethical and medical issues in patient documentation, confidentiality and ownership of intellectual property;
- 5.7.6 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
- 5.7.7 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;

In order to make students learn better, there must be a provision for periodic teacher trainings and monitoring of teaching/learning activities under the guidance of a medical education unit/department.

An annual 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.

## **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 subjects and also in aggregate.

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);
- 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 where admission to the MBBS program is sought by the candidate.

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.

## **8.2 Selection of students:**

8.2.1 Eligible candidates desirous of pursuing MBBS program must take the specific MEE conducted by the respective university/academy/institution 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 All universities/academies/institutions should have a fair process of selection of international students to get the motivated and academically sound students; however, Nepal Medical Council can review the policy if the situation demands in order to maintain quality of medical education.

## **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.

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

Professor/Associate Professor – one

Assistant Professor/Lecturer – two

Senior Resident/Registrar/Teaching Assistant/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.

All faculties must be approved by the concerned university authorities and registered with the Nepal Medical council.

All the heads of the departments should be a Professor/ or an Associate professor and should not be a visiting faculty.

**9.6. Eligibility criteria for faculty:**

9.6.1 All faculty appointments must be according to the rules of the concerned university/academy/institution.

9.6.2 All MBBS personnel must possess a basic university postgraduate degree 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 within one year of joining the faculty.

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

The nomenclatures of the designation for faculty positions are:

- Professor
- Associate Professor
- Assistant Professor
- Lecturer

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.

All affiliated institutions must have the teaching faculty approved by the parent university/academy/institutions.

### 9.8. Faculty requirements of in Basic Medical Sciences and Clinical Sciences for annual Intake of 50, 100 and 150 Student:

#### Department of Anatomy:

No of student intake	Prof.	Assoc Prof.	Asst.Prof/Lect	Total
150 Students	1	2	4	7**
100 Students	1	1	3	5*
50 Students	1		2	3*

- \* denotes one Visiting MS anatomy/PhD faculty, acceptable as faculty requirements.
- \*\* denotes two Visiting MS anatomy/PhD faculty, acceptable as faculty requirements.
- 2/3<sup>rd</sup> of faculty should be with MS Anatomy within 2 years.

#### Department of Physiology:

No of student intake	Prof.	Assoc Prof.	Asst.Prof/Lect	Total
150 Students	1	1	4	6**
100 Students	1	1	2	4*
50 Students	1		2	3*

- \* denotes one Visiting MD physiology/PhD faculty, acceptable as faculty requirements.
- \*\* denotes two Visiting MD physiology/PhD faculty, acceptable as faculty requirements.
- 2/3<sup>rd</sup> of faculty should be with MD Physiology within 2 years.

**Department of Biochemistry:**

No of Students intake	Prof.	Assoc.Prof.	Asst.Prof/Lect.	Total
150 Students	1	1	3	5*
100 Students	1	1	2	4*
50 Students	1		2	3*

- \* denotes one Visiting faculty acceptable as faculty requirements.
- 2/3<sup>rd</sup> of faculty should be with MD Biochemistry qualification within 2 years.

**Department of Pharmacology:**

No of Students intake	Prof.	Assoc.Prof.	Asst.Prof/Lect.	Total
150 Students	1	1	3	5*
100 Students	1	1	2	4*
50 Students	1		2	3*

- \* denotes one Visiting MD Pharmacology/PhD Faculty, acceptable as faculty requirements.
- 2/3<sup>rd</sup> of faculty should be with MD Pharmacology within 2 years.
- Non Medical faculty only having M.Sc. Clinical pharmacology degree can be acceptable.

**Department of Microbiology:**

No of student intake	Prof.	Assoc.Prof.	Asst.Prof/Lect.	Total
150 Students	1	1	3	5*
100 Students	1	1	2	4*
50 Students	1		2	3*

- \* denotes one Visiting faculty, acceptable as faculty requirements.
- 2/3<sup>rd</sup> of full time faculty should be with MD Microbiology or equivalent qualification within 2 years.

**Department of Pathology:**

No of student intake	Prof.	Assoc. Prof.	Asst. Prof. /Lect.	Total
150 Students	1	2	4	7**
100 Students	1	1	3	5*
50 Students	1		2	3

- \* denotes one Visiting MD pathology faculty, acceptable as faculty requirements.
- \*\* denotes two Visiting MD Pathology faculty, acceptable as faculty requirements.

**NB:** *In order for the non-medical basic science faculty to become Associate Professor or Professor, it is mandatory to possess Ph.D. degree in the appropriate discipline.*

**Department of Internal Medicine:**

No of student intake	Prof	Assoc. Prof.	Asst .Prof/Lect.	Total
150 Students	2	2	6	10**
100 Students	1	2	5	8**
50 Students	1	1	4	6*

- \* denotes one Visiting MD Internal Medicine, acceptable as faculty requirements.
- \*\* denotes two Visiting MD Internal Medicine faculty, acceptable as faculty requirements.

**Department of Surgery:**

No of student intake	Prof	Assoc. Prof	Asst. Prof/ Lect.	Total
150 Students	2	2	6	10**
100 Students	1	2	5	8*
50 Students	1	1	4	6*

- \* denotes one Visiting MS Surgery faculty, acceptable as faculty requirements.
- \*\* denotes two Visiting MS Surgery faculty, acceptable as faculty requirements.

**Department of Obstetrics and Gynecology:**

No of student intake	Prof	Assoc. Prof	Asst. Prof/Lect.	Total
150 Students	2	2	6	10**
100 Students	1	1	4	6*
50 Students	2		2	4

- \* denotes one Visiting MD Obstetrics and gynaecology, acceptable as faculty requirements.
- \*\* denotes two Visiting MD Obstetrics and gynaecology, acceptable as faculty requirements.

**Department of Pediatrics:**

No of student intake	Prof	Assoc. Prof	Asst. Prof/Lect.	Total
150 Students	1	2	4	7**
100 Students	1	1	3	5*
50 Students	2		2	3

- \* denotes one Visiting MD Paediatrics, acceptable as faculty requirements.
- \*\* denotes two Visiting MD Paediatrics, acceptable as faculty requirements.

**Department of Orthopedics:**

No of student intake	Prof	Assoc. Prof	Asst. Prof/Lect.	Total
150 Students	1	2	4	7**
100 Students	1	1	3	5*
50 Students	1		2	3

- \* denotes one Visiting MS Orthopaedics, acceptable as faculty requirements
- \*\* denotes two Visiting MS Orthopaedics, acceptable as faculty requirements.

**Department of Anesthesiology:**

No of student intake	Prof.	Assoc. Prof	Asst. Prof/Lect.	Total
150 Students	1	2	4	7*
100 Students	1	1	4	6*
50 Students	1		3	4

- \* denotes one Visiting MD Anaesthesiology, acceptable as faculty requirements.

**Department of Radiology:**

No of student intake	Prof	Assoc. Prof	Asst. Prof/Lect.	Total
150 Students	1	1	4	6*
100 Students	1		4	5*
50 Students	1		2	3

- \* denotes one Visiting MD Radiology, acceptable as faculty requirements.

**Department of Ophthalmology:**

No of student intake	Prof	Assoc. Prof	Asst. Prof./lect.	Total
150 Students	1	1	3	4*
100 Students	1		2	3*
50 Students	1		1	2

- \* denotes one Visiting MD Ophthalmology, acceptable as faculty requirements.

**Department of Otorhinolaryngology:**

No of student intake	Prof	Assoc. Prof	Asst. Prof/lect.	Total
150 Students	1	1	2	4*
100 Students	1		2	3*
50 Students	1		1	2

- \* denotes one Visiting MS Otorhinolaryngology, acceptable as faculty requirements.

**Department of Psychiatry:**

No of student intake	Prof	Assoc. Prof	Asst. Prof/Lect.	Total
150 Students	1	1	2	4**
100 Students	2		1	3*
50 Students	1		1	2

- \* denotes one Visiting MD Psychiatry, acceptable as faculty requirements.
- \*\*denotes two Visiting MD Psychiatry, acceptable as faculty requirements.

**Department of Dermatology:**

No of student intake	Prof	Assoc. Prof	Asst .Prof/Lect.	Total
150 Students	1	1	2	4**
100 Students	1		2	3*
50 Students	1		1	2

- \* denotes one Visiting MD Dermatology, acceptable as faculty requirements.
- \*\*denotes two Visiting MD Dermatology, acceptable as faculty requirements.

**Department of Dentistry:**

No of student intake	Prof	Assoc. Prof	Asst. Prof/Lect.	Total
150 Students		1	4	4*
100 Students		1	2	3*
50 Students		1	1	2*

**Note:** Applicable to colleges having medical program only.

- \* denotes one Visiting MDS, acceptable as faculty requirements.

**Department of Community Medicine:**

No of student intake	Prof	Assoc. Prof	Asst. Prof/Lect.	Total
150 Students	1	2	5	8**
100 Students		2	4	6*
50 Students		1	2	3

- \* denotes one Visiting MD Community Medicine/PhD faculty, acceptable as faculty requirements.
- \*\* denotes two Visiting MD Community Medicine/PhD, acceptable as faculty requirements.
- 2/3<sup>rd</sup> of faculty should be with MD Community Medicine qualification within 2 years

**Department of Forensic Medicine:**

No of student intake	Prof	Asso. Prof	Asst.Prof/Lect	Total
150 Students		1	2	3*
100 Students		1	1	2*
50 Students		1	1	2*

- \* denotes Visiting MD Forensic Medicine faculty, acceptable as faculty requirements.

### Department of Emergency and General Practice:

No of student intake	Prof	Asso. Prof	Asst.Prof/Lect	Total
150 Students	1	1	4	6*
100 Students	1		3	4*
50 Students	1		2	3*

- \* denotes Visiting M.D faculty in General Practice or Emergency Medicine, acceptable as faculty requirements.
- The faculty should possess PG degree in Emergency Medicine or General Practice within two years.
- Other human resources for health should be recruited as per the need for providing emergency and casualty services.

**NB:** *Non-medical basic science faculty cannot become associate professor or professor until he or she has completed Ph.D. in the relevant subject.*

### Department of Medical Education:

The Medical Education Department should, as a minimum, consist of:

1. Principal
2. Faculty staff that may belong to other departments having interest and adequate exposure in medical education -4

### Criteria for Visiting Faculties:

- The head of department should be full time faculty working in the institute and cannot be a visiting faculty at any other institution.
- One faculty can work as visiting faculty at a time in only one another institute.
- Visiting faculty must take prior permission from the parent institute and be approved by the NMC.
- Institute should make necessary arrangement for taking adequate number of classes for visiting faculty and number of classes should be proportionate to the number of faculties and should fulfil the requirement of integrated approach.
- Principally, for 100 or more than 100 intakes there may be upto two visiting faculties in any one department.
- Visiting faculties should be replaced as early as possible by sponsoring candidates for faculty development in the concerned departments.
- For quality assurance and the smooth running of medical colleges and hospital services, NMC may modify the criteria for visiting faculties as and when deemed necessary.

**Bed Occupancy and No of OPD:**

No of student intake	Bed Occupancy	OPD Patient
150 Students	60%	750
100 Students	60%	500
50 Students	60%	250

**Distribution of beds for intake of 150, 100 and 50 admission (Table No.1):**

S.N	Subject	for 150 admission	For 100 admission	For 50 admission
1	Internal Medicine (including sub-specialties)	Total : 130 beds 100 General +30 ICU/CCU	Total : 90beds 70General +20 ICU/CCU	Total : 60 beds 50 General +10 ICU/CCU
2	General Surgery (including sub-specialties)	Total : 135 beds 90 General +15 SICU+30 Post op	Total : 90beds 75General +5 SICU+10 Post op	Total : 60 beds 50 General + 10 SICU/ Post op
3	Obstetrics and Gynecology	Total : 120 beds 90 OBG+30Gyn	Total : 90 beds 60 OBG+30Gyn	Total : 60 beds 30 OBG+30Gyn
4	Pediatrics	Total :95 Beds 70 General +25 NICU/PICU	Total :60 Beds 50 General +10 NICU/PICU	Total :60 Beds 50 General +10 NICU/PICU
5	Orthopedics	90	60	30
6	Ophthalmology	30	30	30
7	Otorhinolaryngology	30	30	30
8	Psychiatry	30	30	30
9	Dermatology	15	15	10
10	Emergency and Observation	60	30	30
11	Dental Surgery	15	10	5
	<b>Total</b>	<b>750</b>	<b>535</b>	<b>405</b>

- Each department having more than 30 beds should function as separate unit or department.
- There should be 4 super speciality services in the hospital for the medical college admitting 150 students within two years.
- There should be 2 super speciality services in the hospital for the medical college admitting 100 students within two years.
- Medical colleges having medical and dental program should have additional bed as per their requirements.

**NB:** The beds in the medical colleges' own Satellite Centres or Community Training Centers/Hospitals (District, PHC) can be counted in the total number of beds. 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.

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

1. Newly established medical colleges should fulfil all the criteria like having their own infrastructure, hospital, faculty, hostel etc as per the NMC norms from the first day of starting the program.

**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 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.

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

- 300 bedded hospital.
- Community Training Centre (CTC) with adequate facilities.
- Computer -assisted teaching- learning and e-learning facilities.
- Classrooms for self directed teaching learning, one for 10 to 15 students.
- Ambulatory teaching learning facilities in each clinical department.

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

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

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

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

11.2. **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.

11.3. **Planning and Evaluation Section:**

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

11.4. **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.

11.5. **Procurement and Store Section:**

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

11.6. **Learning Resources Section:**

11.6.1 **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.

#### 11.6.2 **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.

#### 11.6.3 **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.

#### 11.6.4 **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.

#### 11.6.5 **Auditorium:**

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

11.7. **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.

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.

11.8. **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.

11.9. **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.

**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 centres hospitals (District, PHC) which are adopted by the colleges will not be counted towards fulfilment of the NMC requirements.

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.

### **III. 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.

End

