

**REGULATIONS FOR
POSTGRADUATE MEDICAL EDUCATION
(MD/MS PROGRAMS)
2017**



NEPAL MEDICAL COUNCIL

Bansbari, Kathmandu, Nepal

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SECTION-A:



NEPAL MEDICAL COUNCIL

REGULATIONS FOR POSTGRADUATE MEDICAL EDUCATION (MD/MS Programs)



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 21st Mangshir-2072, anonymously recommended to amend the existing **"Regulations for Postgraduate Medical Education (MD/MS: Master in Medicine/ Master in Surgery) Programs -2012"** 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-2012, which was also anonymously passed from the Full House Meeting of Nepal Medical Council held on Baisakh20, 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 **"Regulations for Postgraduate Medical Education (MD/MS) Programs-2017"**.

2. Objective:

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

3. Commencement:

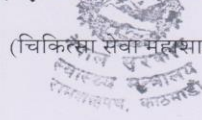
They shall come into force immediately.



पत्र संख्या: ७३१७४
चलानी नं.: २४४८

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: Regulation for Postgraduate Medical Education (MD/MS Programs) 2017 स्वीकृत गरीएको।

तहाँ काउन्सिलको च.नं. ६९५ मिति २०७४।०१।२८ को पत्र सम्बन्धमा तहाँ काउन्सिलद्वारा तर्जुमा गरी स्वीकृतिको लागि पेश गरीएको Regulation for Postgraduate Medical Education (MD/MS Programs) 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 Specialist Doctor must be a sound scholar, professionally enough competent to analyze medical problems critically, lifelong learner; along with leadership qualities, with 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 "regulations for Postgraduate Medical Education MD/MS 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 match 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 have become unrealistic at present time are abolished.

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

Prof. Dharma Kanta Baskota

Chairman, Nepal Medical Council

Bansbari, Kathmandu

SECTION-B:

Part-I

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. There is a big mismatch in rural and urban human resource for health.

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" residents 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 residents 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 postgraduate 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 MD/MS 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.

Part – II

OVERVIEW OF POSTGRADUATE MEDICAL EDUCATION PROGRAMS:

General principles regarding Postgraduate Medical Education Program:

- ◆ The Postgraduate Medical Education Program should be conducted by the University/Institution/ Academy recognized by the Nepal Medical Council (NMC).
- ◆ Postgraduate Medical Education Program in general shall award the degree of Doctor of Medicine (MD) or Master of Surgery (MS) in the prescribed branches of basic, Para-clinical and clinical subjects belonging to modern medicine, and shall be of a minimum of three years duration including examination period.
- ◆ It should be competency based.
- ◆ It should encourage independent and self-directed learning.
- ◆ A modular approach to the course curriculum is essential and clinical exposure to related subspecialties of a particular discipline.
- ◆ Teaching learning in ambulatory settings should be planned in the curriculum.
- ◆ There shall be a combination of formative and summative assessments with remedial measures during the course.
- ◆ Thesis is a mandatory part of the program.
- ◆ Skill development courses like Cardio Pulmonary Resuscitation-CPR, Primary Trauma Care-PTC, Advance Trauma Life Support-ATLS, Advance Cardiac Life Support-ACLS, Research Methodology, Communication Skills and other relevant skill courses are the integral part of the program for all the specialties.
- ◆ There should be 3 months "Peripheral Health Facility Posting"(Community posting) of the post graduates residents in their relevant specialty for exposure to the peripheral hospitals, either run by Government or Semi Government or Hospitals, registered under Ministry of Health, Nepal; however the posting should be educationally and professionally meaningful. ***(Details of posting is given in Annex 1)***

Goal of the Postgraduate Medical Education Program:

The goal of the Postgraduate Medical Education Program is to produce professionals with:

- a. Required clinical competency / Academic excellence
- b. Teaching capability
- c. Research ability
- d. Leadership quality
- e. Communicative ability
- f. Collaborative ability
- g. Health advocacy ability

General Objectives of the Postgraduate Medical Education Programs:

At the end of the Postgraduate Program the candidate should be able to:

1. Demonstrate sufficient level of theoretical knowledge and practical skills relevant to the given specialty.
2. Demonstrate sufficient level of understanding of the basic sciences relevant to the concerned specialty.
3. Diagnose and manage the conditions/problems in the specialty concerned
4. Acquire adequate knowledge on patient safety.
5. Practice the specialty concerned ethically.
6. Appraise review scientific literature critically.
7. Undertake research activity in the subject concerned.
8. Educate/facilitate members of his/her team regularly.
9. Use the effective methods of learning including information, communication and Tele-Medicine technology.
10. Recognize the importance of the concerned specialty in the context of national health needs/programs.
11. Demonstrate skills in medical record keeping in the relevant specialty.
12. Demonstrate empathy and humane approach towards patients and their families and exhibit appropriate interpersonal behavior in keeping with the norms and expectations of the society.
13. Develop skill as a self-directed learner, recognize continuous educational needs, and, select and use appropriate learning resources.
14. Acquire new knowledge and skills through continuous professional development(CPD);
15. Demonstrate relevant skills in using appropriate education methods and techniques as applicable to the teaching learning of medical and other categories of health science residents.
16. Function as an effective leader/member of a health team engaged in health care, research and medical education.
17. Develop the skills required to work in inter/multi-professional team.

Statement of competencies:

Keeping in view of the general objectives of Postgraduate Medical Education Program, each University/Institution/ Academy which is involved in the program should define specific competencies together with learning objectives to be acquired by the Postgraduate resident and should be spelt out in clear terms in the curriculum.

The statement of competencies shall be brought to the notice of Postgraduate residents at the beginning of the program so that they are aware of achieving the competencies expected of them in a given time period.

Postgraduate Medical Degrees:

The award of Postgraduate degrees shall include *Doctor of Medicine (MD)* and *Master of Surgery (MS)* in the related specialty of medical science. The award of the degree by different Universities/Institutions/ Academy throughout the country should be the same.

The **Doctor of Medicine (MD)** degrees recognized by the Nepal Medical Council are awarded in the following specialties:

1. Anesthesiology
2. Biochemistry
3. Community Medicine
4. Dermatology
5. General Practice and Emergency Medicine
6. Forensic Medicine
7. Internal Medicine
8. Microbiology
9. Obstetrics & Gynecology*
10. Pathology
11. Pediatrics
12. Pharmacology
13. Physiology
14. Psychiatry
15. Radio-diagnosis
16. Radiation-oncology
17. Ophthalmology*

The **Masters of Surgery (MS)** degrees recognized by the Nepal Medical Council are awarded in the following specialties:

1. Anatomy
2. General Surgery

3. Ophthalmology*
4. Orthopedics
5. Otorhinolaryngology- Head and Neck Surgery
6. Obstetrics and Gynaecology*

Note: *

- In Ophthalmology and Obstetrics & Gynecology the degree may be awarded as MD or MS as per University/Institution/Academy rules and regulations.

Attention:

- ***To start any postgraduate new program in any University/Institution/Academy or in their constitutional or affiliated colleges/campuses a prior permission from NMC has to be obtained.***

Part - III

MINIMUM REQUIREMENT FOR POSTGRADUATE INSTITUTIONS:

General principles for a Postgraduate Institution:

- ◆ To start a post graduate medical education program in any Institution, the first batch of the students must have completed one full cycle of MBBS/ BDS course including one year of compulsory rotatory internship except in Basic sciences programs, which could be started after completion of third year of first batch of MBBS. But for those public academy and specialty centers which are established by the act of parliament of Nepal, for the promotion of specialty services and post graduate medical education in the country, conduction of under graduate program will not be mandatory.
- ◆ To start a Postgraduate Medical Education Program, an institution should obtain the recognition from Nepal Medical Council.
- ◆ The institutions must be a University or an appropriate institution of Nepal Government.
- ◆ The institutions must have faculties of technical/medical/health science specialists in required numbers as per the NMC guidelines.
- ◆ The institutions must fulfill all requirements in terms of physical infrastructure, academic and administrative human resources, equipment and materials required for the education program.
- ◆ There must be an appropriate person heading such an institution.
- ◆ The number of residents that can be enrolled in a Postgraduate program in any recognized postgraduate institutions shall be determined by the facilities available in terms of infrastructure, faculties and other criteria as per the NMC guidelines.
- ◆ To increase the existing admission capacity of the Postgraduate residents, an institution must take prior permission from the Nepal Medical Council.
- ◆ The institution must have different protocols for the proper patient care, residents' training, patients safety and treatment providers safety, whenever or wherever applicable:
- ◆ An affiliated college of the university must have the approval of the concerned university prior to admission.

NB: It is strongly recommended to all University/Institution/Academy that all postgraduation programs should preferably start on the same fixed date throughout the country, to bring uniformity in entrance (common entrance) and exit examinations. Likewise, it will also help Nepal Medical Council to organize specialty registration examination immediately after completion of their exit examination, so that after certification by the Council, specialist could serve the people immediately without any gap.

Minimum requirements for a Postgraduate Institution:

- ◆ An institution conducting both undergraduate and postgraduate program should satisfy the minimum requirements for undergraduate medical education program (MBBS/BDS) as well as fulfill additional requirements required for Postgraduate program as determined by the NMC. But for those public academy and specialty centers which are established by the act of Parliament of Nepal, for the promotion of specialty services and post graduate medical education in the country, conduction of under graduate program will not be mandatory
1. An institution imparting only Postgraduate program should:
 - a. Provide facilities consistent with the overall academic program including exposure in applied basic medical sciences and other related subjects/areas as prescribed by the NMC.
 - b. Must have faculties of related specialties in required number of their own and should have appropriate arrangement made with other institutions for imparting teaching/learning in basic sciences as per the NMC guidelines.
 - c. Must have facilities of ancillary departments such as Emergency, ICU, Post-operative ward, Radiological and imaging, pathology, blood bank etc. related to the concerned subject as per the requirement of the curriculum.
 2. The Postgraduate institution should possess basic infrastructure required for teaching learning activities of post graduates residents. These include seminar room with separate rooms for PG residents in the department, audio-visual facility, library with required number of books, journals, periodicals, and internet facility with on-line journals, duty doctor's room in the hospital for duty, and departmental laboratories and museums specific to the concerned specialty.
 3. Space should be available for ambulatory Teaching - Learning in OPD set up.

Postgraduate Faculty/Teacher requirement:

1. A clinical department or its unit for Postgraduate program shall have a minimum of 3 (three) fulltime faculty members belonging to the related subject/specialty, of whom one shall be a Professor, one Associate Professor/Reader, and one Assistant Professor/Lecturer, (or three postgraduate faculties of which one should be a Professor/ Associate Professor) possessing the qualification and experience as prescribed by the Nepal Medical Council.
2. To be recognized as a Postgraduate program faculty, one must have a minimum of five years of teaching experience after the Postgraduate Master Degree qualification (MD/MS/MDS) and two years after Subspecialty DM/MCh qualification.
3. Only Professor and Associate Professor/Reader will be eligible to become a preceptor (guide) for Postgraduate resident.
4. No Postgraduate teacher shall be a preceptor for more than one specialty.
5. All postgraduate faculties must be attended Research methodology workshops within five years.

Physical requirement of Postgraduate Institutions:

1. The Postgraduate institutions must fulfill all requirements in terms of physical infrastructure, clinical and administrative facilities required for the education program.
2. The institution should provide residential facility and avail related extra-curricular/recreational facilities for overall round development of the resident.
3. The Postgraduate Medical Institutions should comprise of both academic and administrative infrastructure of its own required for education and administrative purpose.

4. The academic section should comprise of the following:
 - a. Lecture/Seminar rooms
 - b. Discussion/PG resident room
 - c. Examination hall: desirable
 - d. Library/Departmental Library
 - e. Clinical Laboratory
 - f. Research Laboratory/Division/Unit
 - g. Out-patient Department
 - h. In-patient Department
 - i. Medical Education Department
 - j. Skill laboratory
 - k. Computer assisted learning facility
 - l. Simulation based learning facility

5. The administrative section should comprise of the following:
 - a. General administration
 - b. Personnel administration
 - c. Account
 - d. Medical record section
 - e. Store/Procurement
 - f. Meeting Hall
 - g. Planning & evaluation
 - h. Maintenance
 - i. Social welfare & counseling

Out-Patient Departments:

There shall be adequate space and sufficient number of cubicles available for out-patient service. For the provision of ambulatory teaching learning activities, every out-patient department should have a separate teaching room for PG residents with the facilities to accommodate 8-10 residents besides other clinical facilities. Such departments should preferably provide the facilities for internet search and related books for reference.

Bed strength in Clinical Departments:

1. A department to be recognized for Postgraduate academic program, shall have not less than 60 (sixty) beds each for General Medicine, General Surgery, Pediatrics, Obstetrics and Gynecology and Orthopedic departments, 30 (thirty) beds each for other departments except Dermatology, Ophthalmology and Psychiatry which shall have a minimum of 10 (ten) beds as most of the teaching learning activities in these departments takes place in outpatient department. Likewise, for MD-Radiation Oncology, the department shall have minimum of 15 dedicated beds. The requirements of beds shall not be applied in post graduate degree courses of Radiology and Anesthesia as well as in Basic and Para-clinical departments.

2. For clinical departments having more than one unit; each unit should have at least 30 (thirty) beds in General Medicine, General Surgery, Pediatrics, Obstetrics and Gynecology and Orthopedics. In departments performing large number of day care surgeries like Ophthalmology and ENT-Head and Neck Surgery, having more than one unit, each unit should have at least 10 beds.

3. For the requirements mentioned above under Clause 1, only the number of beds of the own institution will be counted. ***Other hospital(s) can be used for clinical placement and exposure of the Postgraduate residents, which however shall not be counted by the NMC.***

Bed Occupancy Rate:

For normal teaching learning of Postgraduate medical residents, the patient occupancy rate of the hospital bed in the concerned department for concerned subject should not be less than 60% in all medical college teaching hospitals. However, 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 small.

Learning Resources/Library:

Adequate reference books, journals, periodicals, internet search facility and on line journals for each postgraduate resident should be available for the Postgraduate program in the concerned institution. In addition, adequate number of books and specialty journals must be available in the departmental library.

Laboratory facilities:

The Postgraduate institution should have adequate clinical laboratory facilities for the training of Postgraduate residents. Such laboratories shall provide all the investigative facilities (e.g. pathology, histopathology, microbiology) and that should be regularly updated keeping in view of the recent advancement and research requirements, in addition clinical departments should have their own departmental laboratories.

The institution should have required learning materials/specimens (e.g. autopsies, biopsies, cytopsies etc.) /computer assisted learning materials as demanded by the academic program as mentioned in the curriculum.

For training of residents in non-clinical departments, proper and contemporary laboratory facilities shall be made available. Besides, the institution must also have the facility of research laboratory related to the specialized subject.

Equipment:

The Postgraduate institution should possess required medical equipment, instruments, tools, materials and consumables specific to the concerned specialty including the latest ones as prescribed by the University/Institution/Academy as mentioned in the curriculum/yard stick which should be updated from time to time.

Number of Postgraduate Residents to be admitted:

The number of residents that can be admitted in Postgraduate program shall be determined by the facilities available in terms of academic activities, infrastructure, faculties and other teaching materials as per the NMC guidelines.

A clinical department or its unit for Postgraduate program shall have a minimum of 3 (three) fulltime faculty members belonging to the related subject/specialty, of whom one shall be a Professor, one Associate Professor/Reader, and one Assistant Professor (KU, PAHS, NAMS, BPKIHS)/Lecturer (TU), (or three postgraduate faculties of which one should be a Professor/ Associate Professor) possessing the qualification and experience as prescribed by the Nepal Medical Council.

- A unit having one Associate Professor and two Assistant Professors/Lecturers can admit one resident in one academic year.
- A unit having one Professor and two Assistant Professors/Lecturers can admit two residents in one academic year.
- A unit having one Professor, one Associate Professor and two Assistant Professors/Lecturers can admit three residents in one academic year.

The requirement of units and beds shall not apply in the case of Postgraduate degree course in Basic and Para-clinical departments. The ratio of recognized Postgraduate faculty to residents shall preferably be maintained at 1:2 based on the yard stick developed by NMC.

If preceptor leaves the program in between, the university/institution should have alternate preceptor for the resident within 35 days.

Essentials of Postgraduate Academic Program:

1. All candidates joining the Postgraduate program shall work as full time residents during the period of program attending not less than 90% (ninety percent) of the training during each academic year and should be given full time responsibility, assignments and participation in all facets of the educational process.
2. All Postgraduate residents shall be paid stipends as per the rule of the University/Institution/Academy; similar procedure shall be followed in the matter of grant of leave. Generally Postgraduate residents should not have more than two 24 hour duties along with their regular duties in a week.
3. Every institution undertaking postgraduate program shall set up a ***Postgraduate subject committee***, under the chairmanship of a senior faculty member, which shall work out the details of the academics program and also coordinate and monitor its implementation.
4. Postgraduate residents shall maintain a record (log) book of the work carried out by them and the training undergone during the period of academic program including details of exposure in ambulatory setting, details of surgical operations assisted or done independently and other academic activities.
5. The record (log) books shall be checked, assessed and counter signed periodically by the faculty members imparting the training.
6. The Postgraduate residents are required to participate in the teaching of undergraduate students and interns wherever applicable.
7. The postgraduate academic program in clinical disciplines will also require teaching-learning of relevant Basic medical sciences related to the discipline concerned. During the training in basic medical sciences, there shall be training in applied aspects of the subject as well as in allied subjects related to the discipline concerned.
8. In all postgraduate academic programs, emphasis to be given on preventive, promotive, rehabilitative and social aspects and emergency care.
9. Exposure in Medical Audit, Management, Leadership, Health Economics, Health Information System, Health Advocacy, Basics of Statistics preferably Biostatistics, Exposure to Human Behavioral Studies, Medical Ethics, Communication Skill, Research Methodology, Information Technology, Innovations in Medical Education and Practices Management is imparted to the Postgraduate residents.
10. Skill development courses like Cardio Pulmonary Resuscitation-CPR, Basic Life support (BLS), Primary Trauma Care-PTC, Advance Trauma Life Support-ATLS, Advance Cardiac Life Support-ACLS, should be integral part of the program for all the specialties.

11. The methods of teaching learning for Postgraduate residents in basic medical sciences should include Problem Based Learning, Lectures, Seminars, Journal Clubs, and Group Discussion, Participation in Laboratory and Experimental Work, Learning in Skill Lab, Computer Assisted Learning, Simulation Based Learning and involvement in research studies in the concerned specialty and exposure to the applied aspects of the subject relevant to clinical specialties.
12. For residents in clinical disciplines; in-service training, with the residents being given graded responsibility in the management and treatment of patients entrusted to their care, Participation in Seminars, Journal Clubs, Group Discussions, Clinical Meetings, Case Presentation, Grand Rounds, Problem Based Learning and Clinico-Pathological Conferences, Clinico- Radiological Conferences, Practical trainings in the Basic Medical Sciences, as well as in Allied Clinical Specialties and Community Exposure is recommended.
13. Residents should be rotated in major related sub-specialties preferably during the second year of their training, for example rotation in Cardiology, Pulmonology, Neurology, Nephrology, Medical Gastroenterology sub-specialties for MD in Internal Medicine Program and Neuro Surgery, Surgical Gastroenterology, Urology, Cardiothoracic and Vascular Surgery, Plastic Surgery sub specialties for MS in General Surgery Program.
14. 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.

Part -IV

POSTGRADUATE CURRICULUM:

- ◆ There should be curriculum committee for each subject, and the curriculum should be as uniform as possible among all Universities/Institutions/Academies for the same subject.
- ◆ The time frame and competencies expected of the Postgraduate residents is to be defined by the University/Institution/Academy concerned in the curriculum.
- ◆ The curriculum is to be evaluated periodically by the concerned University/Institution/Academy and necessary amendments to be made as and when required.

Requirement of Postgraduate Curriculum:

1. It should be competency based. The strategy to assess such competencies should be built into the program.
2. It should encourage independent, self-directed and problem based learning
3. A modular approach to the course curriculum is essential for achieving a systemic exposure to the various sub-specialties related to a discipline
4. Teaching learning in ambulatory setting should be planned in the curriculum
5. There shall be a combination of formative and summative assessments with remedial measures during the program
6. Thesis should be a mandatory part of the curriculum
7. In clinical and Para clinical disciplines, there should be 3 months "Peripheral Health Facility Posting"(Community posting), preferably second half of the training period of the post graduate residents in their relevant specialty, for exposure to the peripheral hospitals, either run by Government or Semi Government or Hospitals, registered under Ministry of Health, Nepal; however the posting should be educationally and professionally meaningful. ***(Details of posting is given in Annex- 1)***
8. Cardio Pulmonary Resuscitation (CPR)/Basic Life support (BLS), Primary Trauma Care (PTC), Advanced Trauma Life Support (ATLS) and advanced Cardiac Life Support (ACLS) and other relevant skill courses should be integral part of all the programs.
9. Teaching learning of undergraduates, residents and other health professional should be built in into the program

Postgraduate Curriculum must include:

1. Theoretical knowledge related to the subject concerned
2. Practical and clinical skills
3. Proper knowledge in the applied basic sciences pertaining to the specialty
4. Thesis writing including research methodology and basic biostatistics
5. Evidence based learning and critical analysis of the literature
6. Communication skill training for both core communication skill and skill required in special circumstances
7. Development of professional attitudes and behavioral studies including ethical issues, human values
8. Information technology including medical informatics
9. Basic understanding of the pharmaco-economics and health economics

Methods of learning should include:

1. Bedside learning
1. Structured ambulatory learning with specific learning objectives
2. Seminars/Tutorials/ Presentation/ Journal club/ CME
3. Medical audit including mortality audit
4. Problem based learning
5. Literature review / use of information technology
6. Project work/Research undertaking
7. Patient care and management
8. Computer assisted learning/ Learning in Skill lab/ Simulation based learning

Part – V

POSTGRADUATE FACULTY

Eligibility criteria for Postgraduate Faculty:

All medical personnel must possess a basic university postgraduate degree or equivalent qualifications to be eligible to become a Postgraduate teaching faculty. They should be duly registered with the Nepal Medical Council.

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.

Designation of Postgraduate faculty:

The nomenclatures of the designation for faculty positions are:

- 1) Professor
- 2) Associate Professor/Reader
- 3) Assistant Professor(KU,PAHS,BPKIHS,NAMS)/Lecturer(TU)
- 4) Lecturer (KU, PAHS, BPKIHS, NAMS)/Assistant Lecturer/Teaching Assistant (TU).

NB: NMC strongly suggests that the designation/nomenclature of all the faculties should preferably be the same among the Universities/Institutions/Academies throughout the country as far and as soon as possible.

Basic requirement of Postgraduate 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) i.e. enrolment of specialty resident. 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 Doctorate or Postgraduate degree or equivalent qualification in the respective subject or specialty from University/Institution/Academy recognized by the Nepal Medical Council, together with teaching/working experience of minimum **five** years as Associate Professor or equivalent post.
2. 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.
3. 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 Postgraduate degree or equivalent qualification in the respective subject or specialty from University/Institution/Academy recognized by the Nepal Medical Council, together with teaching/working experience of minimum five years as Assistant Professor (KU,PAHS,BPKIHS,NAMS)/Lecturer(TU) or equivalent post 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 Postgraduate degree or equivalent qualification in the respective subject or specialty from an institution recognized by the Nepal Medical Council.
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 degree or equivalent qualification in the respective subject or specialty from an institution recognized 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 Postgraduate subspecialty 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 Postgraduate subspecialty 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) i.e. enrolment of specialty resident.** They may be appointed for the upliftment of overall academic standard and betterment of the training institution.

Part – VI

POSTGRADUATION ENTRY CRITERIA:

Selection criteria for Postgraduate residents:

1. Candidate must have completed MBBS or equivalent degree including compulsory internship.
2. Candidate must be registered with Nepal Medical Council.
3. Candidate must have one year clinical experience after completion of MBBS/BDS in all clinical subjects except Basic sciences and General practice.
4. Selection should be on the basis of the candidate's academic merit.

Criteria for Foreign candidate:

1. The registration to foreign national applying for Postgraduate studies shall be subject to the condition that such person is duly registered as medical practitioner in his/her own country and that his/her degree is recognized by the corresponding Medical Council or concerned authority of respective country of origin.
2. Foreign candidates must be provisionally registered with NMC for the period of their study exclusively for the college/institution where they are admitted. .
3. The entrance requirement for foreign candidates will be according to the rules and regulations of the concerned University/Institutions/Academy; however they should appear in competitive entrance examinations conducted by them.

Selection procedure for Postgraduate residents:

1. Candidates for Postgraduate academic programs shall be selected on merit basis. The criteria for merit will be according to the University/Institution/Academy rules based on the competitive entrance examination.
2. For determining the academic merit, the University/Institution/Academy may adopt any of the following procedures:
 - a. On the basis of merit as determined by a competitive entrance test conducted by the University/ Institution/Academy/ National PG Eligibility Test.
 - b. On the basis of merit as determined by a centralized competitive entrance test held at the national level; the Postgraduate residents may be enrolled in the Postgraduate institutions on the basis of central allotment system.
 - c. In order to be selected for the Postgraduate program, the candidate must qualify in the competitive entrance examination with a minimum score of 50%.
 - d. To qualify to do post graduate study abroad, the candidate must qualify in the competitive entrance examination with a minimum score of 50% taken by University/Institution/Academy of Nepal.

or

- e. They have to pass the entry exam (qualifying exam) taken by the National Board (eg. USMLE, DNB), Royale Colleges, College of Physicians and Surgeons Pakistan (CPSP), Bangladesh College of Physicians and Surgeons (BCPS) and other National State Exam/Board of the respective countries, in which the candidate will be enrolled for PG.

3. The candidates with academic merit should be given an opportunity to select an institution and course of their choice on the merit basis as and when applicable.

4. Commencement of the Subspecialty Postgraduate programs:

Nepal Medical Council strongly recommends to all University/Institution /Academy that the academic session of all Subspecialty/Specialty Postgraduate programs shall start from the same date in all University/Institution/Academy throughout the country, so that the council could organize the Subspecialty/Specialty registration examinations immediately after the completion of their Subspecialty/Specialty training and they can serve the people as a Subspecialist/Specialist immediately without any gap.

Recommended dates to start Postgraduate programs:

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

15 October (~ 2ndKartik) for Subspecialty Postgraduate programs (DM/MCh)

Part – VII

POSTGRADUATE EVALUATION SCHEME:

Assessment Guidelines for Postgraduate Academic Program:

The methods of assessment for Postgraduate residents should include Logbook, Formative assessment, Summative assessment, and Thesis.

The weightage of formative and summative assessments will be as per the norms of the University/Institution/Academy concerned.

Formative Assessment:

There shall be adequate weightage given to the formative assessment as per the university regulations.

Constructive feedback on the performance of the postgraduate resident must be given on an ongoing basis during the formative assessment. It should carry support and counseling to the resident as well.

Formative evaluation shall allow/disallow the resident for the appearance in summative (final) examinations as per University/Institution/Academy regulation.

Attendance of Postgraduate Residents:

All Postgraduate residents should work as full time residents during the period of program attending not less than **90% (ninety percent)** of the training during each academic year.

Evaluation of the Postgraduate Residents:

1. Evaluation of the Postgraduate medical residents should be on the basis of grading or making system as per the norms of the University/Institution/Academy concerned.
2. The resident should be adequately tested for the knowledge, skill and competencies required for the program concerned and obtain a minimum of 50% marks in theory as well as Clinical/Practical separately.

Composition of Postgraduate Examinations:

Postgraduate examinations (MD/MS), in any subject shall consist of Theory papers, Clinical/Practical and Oral examinations, and Thesis.

Theory Papers:

Papers comprising the subjects of basic science and behavioural humanities, different systems and recent advances related to the subject as per the norms of the University/Institution/Academy concerned.

Clinical/Practical and Oral Examinations:

1. Clinical examination for the subjects in clinical sciences shall be conducted to test the competence

of the candidates for undertaking independent work as a specialist/faculty, for which the candidate shall be examined on an objective and structured format.

2. The candidate's clinical competency should be tested with long case / short cases / Objective Structured Clinical Examinations (OSCE) or Objective Structured Practical Examination as per the University/Institution/Academy regulations. Must know skills should be individually tested and recorded in log books.
3. Practical examination for the subjects in basic medical sciences shall be conducted to test the competence of the candidate for making valid and relevant observations based on the experimental/laboratory studies and his/her ability to perform such studies as are relevant to the subject.
4. The oral examinations shall be comprehensive structured and be aimed at assessing the candidate's competency about the subject matter, investigative procedures, therapeutic technique and other aspects of the specialty, which form a part of the examination.

NB: As the post graduate programs are competency based, all the concern University/Institution/Academy are requested to shift from their traditional evaluation system to competency based evaluation system as soon as possible.

Thesis:

1. Every candidate shall carry out research work on an assigned topic following standard research methodology under the guidance of recognized Postgraduate Guide, the results of which shall be written up and submitted in the form of a thesis. The provision of Co-guide may be undertaken whenever necessary.
2. Professor and Associate Professor shall be eligible to be the thesis guide (preceptor) and Assistant Professor and above shall be eligible for the thesis co-guide of the Postgraduate residents.
3. Research proposal should be submitted to the Institutional review board and clinical committee then to the post graduate subject committee of the University/ Institute/Academy concerned department before undertaking the thesis.
4. Work for thesis writing is aimed at contributing to the development of a spirit of enquiry, besides exposing the candidate to the techniques of research, critical analysis, acquaintance with the latest advances in medical sciences and the manner of identifying and consulting available literature.
5. Thesis should be reviewed and approved by the concern department of the college and shall be submitted at least six months before the theory and clinical/practical examinations. The acceptance of the thesis is pre-requisite to appearing in the final examinations.
6. Evaluation of thesis should be done on a structured basis including the appropriate statistical review as per the University/Institution regulations.

Number of Candidates to be examined:

The maximum number of candidates to be examined in 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 eight for postgraduate degree programs (MD/MS/MDS).

Guidelines on appointment of Postgraduate Examiners:

1. Postgraduate examiner shall be appointed in the related subject on the fulfillment of the requirements and on the basis as laid down by the Nepal Medical Council & University/Institution/Academy concerned.
2. All the Postgraduate examiners shall be appointed from recognized Postgraduate faculty members. Only Professor shall be appointed as an External examiner whereas Professor as well as Associate Professor shall be appointed as an internal examiner.
3. For all Postgraduate examinations, the minimum required number of examiners shall be four, out of which at least two (50%) shall be External Examiners, who shall be invited from other recognized universities other than one's own university.
4. The external examiner who fulfills the condition as stated shall be invited from another recognized university or from outside the country. In exceptional circumstances, examinations may be held with 3 (three) examiners out of which two should be external. In such conditions Nepal Medical Council should be intimated with the justification of such examination.
5. Where there is more than one centers of examination, there shall be co-coordinator appointed by the university/institution who shall supervise and co-ordinate the examination on behalf of the university with independent authority.
6. An external examiner shall ordinarily be appointed for not more than **two** consecutive terms in the same University/Institution/Academy.

PART-VIII

Specialty Registration Examination for the Postgraduates: (Implemented from 10th February, 2012)

Candidates, who obtain the Postgraduate Degree, will have to appear in a competency based examination (comprising of testing Knowledge, Skill, and Attitude), for their specialty registration with NMC. An expert team of examiners under NMC will be constituted for this purpose. Only qualified candidates in Specialty Registration Examination, conducted by Nepal Medical Council will be provided Specialist Registration Certificate from Nepal Medical Council. However, Nepal Medical Council can change the modality of the exam whenever deemed necessary.

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

Aims and objectives of questions of specialist registration examination:

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

Subject distribution:

Subject	No. of questions
Basic medicine/science	30%
Principle and practice	45%
Subspecialty and recent advances	25%

Marks distribution:

Subject	No. of questions
MCQs	60%
CSQs	40%

PART-IX

Peripheral Health Facility Posting:

Anex1: "Peripheral Health Facility Posting"(Community posting):

- "Peripheral Health Facility Posting"(Community posting), means posting of the residents of clinical and Para - clinical disciplines of post graduate program in District, Zonal, Sub-regional and Regional level Hospitals, under Ministry of Health, Government of Nepal or other semi-governmental hospitals located far from the site of Academic institutions/Medical colleges in underserved areas.
- Posting of residents will be appropriate in those hospitals where there is allocation of posts of physician, surgeon, obstetrician & gynecologist, pediatrician, orthopedic surgeon, generalist (MDGP) and anesthesiologist, but physical absence of these specialists are there, as for fulfillment of the specialists. Resident of anesthesia should be posted only in those hospitals where there is physical presence of surgeon or ICU is running or there is possibility to run ICU.
- It will be ideal to form a group of residents, comprising of specialties like internal medicine, general surgery, obstetrics & gynecology, pediatrics, orthopedics, and anesthesia to post in the district level hospitals. At the same time, supervision of these residents needs to be considered.
- There is no need of Peripheral Health Facility Posting of residents for specialties of basic sciences: MS-Clinical Anatomy, MD-Clinical Physiology and MD-Clinical Pharmacology.
- Residents of MD-Clinical Biochemistry, MD-Clinical Microbiology, and MD- Pathology should be preferably posted in Regional, Sub-Regional and Zonal Hospitals as per need of these hospitals.
- Residents of MD-Forensic Medicine should be posted from Regional level hospitals to the District level hospitals as per their need.
- All MDS residents should be preferably posted in those hospitals where there is availability of "Dental Chairs".
- Residents of MD-Community Medicine should be preferably posted in District Public Health Offices as per their need.
- Residents of MD-Radiation Oncology should be preferably posted in peripheral hospital where these facilities are available.
- Residents of MD-Radiology should be posted in hospitals where there is availability of functioning X-Ray and USG machines, but it would be better if the hospital has facility of CT and MRI on top of these two facilities.
- Residents of MD-Anesthesiology, MS-General Surgery, MD-Pediatrics, MD-Internal Medicine, MD-Gynae/Obs, MD-Dermatology, MS-Orthopedics, MD-Ophthalmology, MD-General Practice, MS- ENT-Head & Neck Surgery and MD-Psychiatry should be posted preferably either in District or Zonal or Sub-Regional or Regional Level Hospitals as per need of the community. But residents of Anesthesia should be posted only in those hospitals where there is residents of surgical specialties are posted or there is physical presence of surgeon or ICU is running or there is possibility to run ICU.
- At the same time, supervision of these residents to be considered either from University/Institutions/Academy side or Hospital side.
