

Syllabus for Postgraduate Integrated Entrance Examination

2020



Government of Nepal
Medical Education Commission
Sanothimi, Bhaktapur

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Medical Education Commission
Syllabus for Postgraduate Entrance Examination (2020)

Introduction:

Health Professional education was started in Nepal formerly after establishment of Institute of Medicine under Tribhuvan University in 1972 beginning with training of middle level human resources for health. Bachelor level courses in Institute of Medicine was started in 1978 and postgraduate studies since 1982. Similarly, BP Koirala Institute of Health Sciences was established in eastern Nepal in 1993, Manipal Academy of Health Sciences was established under Kathmandu University as a Kathmandu University affiliated private institutions in 1993. Kathmandu University School of Medical Sciences as constituent campus started MBBS program in 2001. Then National Academy on Medical Sciences was established in 2002 and Patan Academy of Health Sciences in 2008.

Since late 90's, over a period of decade, numerous private medical institutions were also opened in affiliation to various universities. In one hand, the rapid development of medical institutions helped for fulfilling the gap between need of human resources for health. In the other hand, there have been issues related to quality in health professional education and also the process and costs related to the entrance examination and student enrollment. In this context, National Medical Education Act 2075 has envisioned the common entrance examination to be conducted by Medical Education Commission for enrollment of students in various programs and colleges throughout the country. As per the board meeting of Medical Education Commission held on 2076.06.01(18 September 2019). Medical Education Commission bears the responsibility to conduct Postgraduate Entrance Examination in the current academic year and Bachelor level entrance exams from the subsequent year. For conducting the Postgraduate common entrance examination, the commission has felt the need to prepare a common syllabus in consultation with experts from various institutions with experience in postgraduate entrance examination.

Objectives:

1. To develop common syllabus for specific programs in PG entrance examination
2. To generate consensus and match logically between the existing PG entrance syllabus effective at various medical institutions
3. To find the scope of improvements / innovations in currently existing PG entrance examination

Process:

1. Institutions conducting postgraduate entrance examinations were officially corresponded to send the ongoing PG programs they are conducting and the syllabus for entrance examinations
2. The available syllabus for related disciplines from various institutions were compiled.
3. Team of experts in the related disciplines representing various institutions worked up for the common syllabus with the help of available compiled documents.
4. Workshop was conducted to scrutinize the contents and other aspects on entrance syllabus involving the experts who developed the syllabus and experienced experts conducting postgraduate entrance examinations in various institutions and head/chief of examination divisions in the respective institutions
5. Workshop involving all head of institutions and concerned regulatory authority was conducted to come up with the consensus.

General consensus:

A common consensus on relevant issues related to syllabus were generated with brainstorming and regular discussions as per above mentioned process involving all stakeholders related to training of postgraduate academic programs.

1. Agreed to develop the syllabus for 12 groups representing all the PG programs:
 - a. MD/MS, MDS, MPH/MSc Public Health, MSc Nursing/MN, MD Ayurveda, MSc Biochemistry/MSc Microbiology, MSc in Basic Medical Sciences, M Pharm, MSc MIT, M. Optometry and MPhil Clinical Psychology.
 - b. To make a single paper for different academic programs with same eligibility criteria e.g. MSc Nursing/MN, MPH/MSc PH, MSc Biochemistry/Microbiology, MSc Basic Medical Sciences Programs.
2. There should be professional council registration for applying to a postgraduate program except for the MPhil Clinical Psychology program where professional council registration is done only after completion of the course.
3. Consensus was generated to have entrance test paper with 200 MCQs to improve Content coverage as well as to match with the recent practice. This will also help differentiation of the candidates by minimizing the tie in the marks among the candidates.
4. Multiple choice questions (MCQs) will be of Single Best Response Type (Type A) with four options.
5. Consensus was generated to allow 3 hours with instruction to paper setter that the stem or vignette of the MCQ should not exceed 60 words.
6. Include 10 marks from the supportive professional topics including medical ethics, basic and advanced cardiac life support, communication skills, rational use of medicines, infection prevention in MDMS and MDS Program in order to address human sensitivity and professionalism.
7. Adopt Criterion Referenced Test with 50% pass mark with no negative marking.
8. Difficulty level of the items should be set from the time of item preparation as:
 - a. Recall: 30%
 - b. Understanding: 50%
 - c. Application and above: 20%

Syllabus

1. Doctor of Medicine (MD)/Master of Surgery (MS)

A. Eligibility:

- MBBS or equivalent from institutions recognized by government of Nepal.
- Registered in Nepal Medical Council.
- Registered in respective medical council of applicant's own country for foreign candidates.
- One-year experience (Not mandatory for MDGP, MD/MS in Basic Medical Sciences and Foreign candidates)
- Candidate should score minimum of 50% (pass marks) in the Entrance Examinations conducted by Medical Education Commission for being eligible to be in the merit list.

B. Examination Format:

- Question type: Single best response type of multiple choice questions
- Option: Four options (A, B, C, D)
- Number of questions: 200
- Full marks: 200
- Cognitive ratio: Recall:Understanding:Application - 30:50:20

C. Duration: 3 hours

D. Weightage:

S.N.	Subjects	Marks
	Clinical	
1.	Medicine	18
2.	Surgery	18
3.	Obstetrics and Gynaecology	12
4.	Paediatrics	12
5.	Orthopaedics	10
6.	Otorhinolaryngology	10
7.	Ophthalmology	7
8.	Anaesthesiology	7
9.	Psychiatry	7
10.	Radiology	7
11.	Dermatology	7
	Basic Medical Science	
12.	Anatomy	12
13.	Physiology	12
14.	Pathology	10
15.	Pharmacology	10
16.	Biochemistry	8
17.	Microbiology	8
18.	Community medicine and research methodology	
	a. Community medicine	6
	b. Research methodology	4
19.	Forensic Medicine	5
20.	Questions related to Medical ethics, rational use of drugs, infection prevention, BLS/ACLS communication skills	10
	Total	200

2. Masters of Dental Surgery (MDS):

A. Eligibility:

- BDS or equivalent from institutions recognized by government of Nepal.
- Registered in Nepal Medical Council.
- Registered in respective medical/dental council of applicant's own country for foreign candidates.
- One-year experience.
- Candidate should score minimum of 50% (pass marks) in the Entrance Examinations conducted by Medical Education Commission for being eligible to be in the merit list.

B. Examination Format:

- Question type: Single best response type of multiple choice questions
- Option: Four options (A, B, C, D)
- Number of questions: 200
- Full marks: 200
- Cognitive ratio: Recall:Understanding:Application - 30:50:20
- Duration: 3 hours

C. Weightage:

S.N.	Subjects	Marks
	Clinical Dental Sciences Subjects	
1.	Oral Medicine and Radiology	
	a. Oral Medicine	10
	b. Radiology	5
2.	Oral and Maxillofacial Surgery	15
3.	Periodontics	15
4.	Conservative Dentistry and Endodontics	
	a. Conservative Dentistry	7
	b. Endodontics	8
5.	Orthodontics and Dentofacial Orthopedics	15
6.	Pedodontics and Preventive Dentistry	15
7.	Prosthodontics and Maxillofacial Prosthetics	
	a. Removable Prosthodontics	8
	b. Fixed Prosthodontics	6
	c. Maxillofacial Prosthetics	1
8.	Public Health Dentistry and Community Medicine & Biostatistics	
	a. Public Health Dentistry	5
	b. Community Medicine & Biostatistics	5
9.	Oral Pathology and Microbiology	10
10.	Dental Implantology	5
	Basic Medical Science	
11.	Anatomy	5
12.	Physiology	5
13.	Pathology	5
14.	Pharmacology	5
15.	Biochemistry	5
16.	Microbiology	5
17.	Oral Biology	5

18.	Dental Materials	5
19.	Forensic Odontology	5
20.	General Medicine	5
21.	General Surgery	5
22.	Anesthesia	5
23.	Questions related to Medical ethics, rational use of drugs, infection prevention, BLS/ACLS, communication skills and practice management in dentistry	10
	Total	200

MMEC

3. Master of Public Health (MPH)/ Master of Science in Public Health (MSc PH)/MPHN/MHPE/MPH(HPE)/MPH(PHSM):

A. Eligibility:

- MBBS, BDS, BPH, BN/BNS/BSc Nursing, BSc MLT/BMLT, BSc MIT BAMS, B.Pharmacy, B.Optomety, BASLP or equivalent from institutions recognized by government of Nepal.
- Registered either in Nepal Medical Council, Nepal Nursing Council, Nepal Health Professional Council, Nepal Pharmacy Council, Nepal Ayurveda Council or Nepal Veterinary Council.
- Registered in respective professional council of applicant's own country for foreign candidates.
- Candidate should score minimum of 50% (pass marks) in the Entrance Examinations conducted by Medical Education Commission for being eligible to be in the merit list.

B. Examination Format:

- Question type: Single best response type of multiple choice questions
- Option: Four options (A, B, C, D)
- Number of questions: 200
- Full marks: 200
- Cognitive ratio: Recall:Understanding:Application - 30:50:20
- Duration: 3 hours

C. Weightage:

S.N.	Subjects	Marks
1.	Biostatistics	30
2.	Epidemiology	30
3.	Health promotion and Education	20
4.	Food and nutrition	20
5.	Research methodology	12
6.	Basic medical science	8
7.	Demography and health informatics	8
8.	Public health and primary health	8
9.	Environmental health and occupational health	8
10.	Family health and reproductive health	8
11.	Global health and international health	8
12.	Sociology and anthropology	8
13.	Public health administration and management	8
14.	Health system management	8
15.	Project planning, development, implementation and evaluation	8
16.	Health economics and health financing	8
	Total	200

4. Doctor of Medicine (MD) in Ayurveda (Kayachikitsa)

A. Eligibility:

- BAMS or equivalent from institutions recognized by government of Nepal.
- Registered in Nepal Ayurveda Council.
- Registered in respective medical council of applicant's own country for foreign candidates.
- Registered in respective professional council of applicant's own country for foreign candidates.
- One-year working experience at government recognized institutions.
- Candidate should score minimum of 50% (pass marks) in the Entrance.
- Examinations conducted by Medical Education Commission for being eligible to be in the merit list.

B. Examination Format:

- Question type: Single best response type of multiple choice questions
- Option: Four options (A, B, C, D)
- Number of questions: 200
- Full marks: 200
- Cognitive ratio: Recall:Understanding:Application - 30:50:20
- Duration: 3 hours

C. Weightage:

S.N.	Subjects	Marks
	Basic Ayurveda medical sciences	
1.	Maulika Sidhanta (Basic Principle of Ayurveda)	10
2.	Sharer Rachna (Anatomy)	8
3.	Sharer Kriya (Physiology)	8
4.	DravyagunaVigyana (Pharmacology)	10
5.	Rasa Shastra evam Bhaishjaya Kalpana (Pharmacy & Pharmaceutics)	10
6.	Roga Vigyanaavam Vikriti Vigyana	8
7.	Swasthavritta (Public Medicine)	6
8.	Agadhatantra evam Vyavahara Ayurveda (Forensic & Jurisprudence)	6
	Clinical subjects	
9.	Kaya chikitsa (General medicine)	28
10.	Shalyatantra (General surgery)	28
11.	Shalakyatantra (Eye, ENT)	26
12.	Kaumarbhritya (Padiatrics)	26
13.	Prasutitantra evam Striroga (Obstetrics and Gynaecology)	26
	Total	200

5. Master in Nursing (MN)/Master of Science (MSc) Nursing/Midwifery:

A. Eligibility:

- BN/BNS/BSc. Nursing/B Midwifery (B.Mid is eligible only for MSc. Midwifery program).
- Registered in Nepal Nursing Council.
- Registered in respective professional council of applicant's own country for foreign candidates.
- One-year experience.
- Candidate should score minimum of 50% (pass marks) in the Entrance Examinations conducted by Medical Education Commission for being eligible to be in the merit list.

B. Examination Format:

- Question type: Single best response type of multiple choice questions
- Option: Four options (A, B, C, D)
- Number of questions: 200
- Full marks: 200
- Cognitive ratio: Recall:Understanding:Application - 30:50:20
- Duration: 3 hours

C. Weightage:

S.N.	Subjects	Marks
1.	Adult nursing (Medical surgical nursing)	20
2.	Midwifery	20
3.	Pediatric nursing (Child health nursing)	20
4.	Community health nursing	20
5.	Psychiatric nursing (Mental health nursing)	20
6.	Nursing research & biostatistics	20
7.	Integrated health science	
	a. Anatomy	6
	b. Physiology	4
	c. Pharmacology	4
	d. Biochemistry	2
	e. Microbiology	2
	f. Pathology	2
8.	Educational science	16
9.	Nursing concepts & ethical aspects in nursing	16
10.	Nursing leadership & management	16
11.	Social and behavioral science	6
12.	Geriatric nursing	6
	Total	200

6. Master of Pharmacy (M.Pharm):**A. Eligibility:**

- a. B. Pharmacy or equivalent degree recognized by government of Nepal.
- b. Registered in Nepal Pharmacy Council.
- c. Registered in respective professional council of applicant's own country for foreign candidates.
- d. Candidate should score minimum of 50% (pass marks) in the Entrance Examinations conducted by Medical Education Commission for being eligible to be in the merit list.

B. Examination Format:

- a. Question type: Single best response type of multiple choice questions
- b. Option: Four options (A, B, C, D)
- c. Number of questions: 200
- d. Full marks: 200
- e. Cognitive ratio: Recall:Understanding:Application - 30:50:20
- f. Duration: 3 hours

C. Weightage:

S.N.	Subjects	Marks
1.	Biopharmaceutics and pharmacokinetics	20
2.	Industrial pharmacy	18
3.	Physical pharmacy	18
4.	Instrumental analysis	18
5.	Quality assurance	18
6.	Pharmacology and toxicology	18
7.	Pharmaceutical jurisprudence	18
8.	Pharmacotherapeutic	18
9.	Clinical pharmacy	18
10.	Hospital pharmacy	18
11.	Pharmacy practice	18
	Total	200

7. Master of Science in Medical Imaging Technology (MSc. MIT):

A. Eligibility:

- BSc. MIT or equivalent degree recognized by government of Nepal.
- Registered in Nepal Health Professional Council.
- Registered in respective professional council of applicant's own country for foreign candidates.
- Candidate should score minimum of 50% (pass marks) in the Entrance. Examinations conducted by Medical Education Commission for being eligible to be in the merit list.

B. Examination Format:

- Question type: Single best response type of multiple choice questions
- Option: Four options (A, B, C, D)
- Number of questions: 200
- Full marks: 200
- Cognitive ratio: Recall:Understanding:Application - 30:50:20
- Duration: 3 hours

C. Weightage:

S.N.	Subjects	Marks
1.	Basic health science (Anatomy & Physiology)	30
2.	Basic Health Sciences (Microbiology/Biochemistry/Pathology/Pharmacology)	20
3.	Biostatistics & research methodology	20
	Core subject: (65)	0
4.	Radiographic technique	20
5.	Fluoroscopic procedures	20
6.	CT procedures	20
7.	MRI procedures	20
	Radiological & Imaging Physics:	
8.	General radiography	10
9.	Fluoroscopy	8
10.	CT	8
11.	MRI	8
12.	Ultrasonography	8
13.	Radiation Protection	8
	Total	200

8. Master of Science (MSc) in Clinical/Medical Biochemistry & Master of Science (MSc) in Clinical/Medical Microbiology:

A. Eligibility:

- Bachelor degree in related subjects **or** BSc(Medical Lab technology) **or** BMLT **or** BSc (Laboratory Medicine), MBBS/BDS **or** its equivalent.
- Registered in respective professional council of Nepal.
- Registered in respective professional council of applicant's own country for foreign candidates.
- Candidate should score minimum of 50% (pass marks) in the Entrance. Examinations conducted by Medical Education Commission for being eligible to be in the merit list.

B. Examination Format:

- Question type: Single best response type of multiple choice questions
- Option: Four options (A, B, C, D)
- Number of questions: 200
- Full marks: 200
- Cognitive ratio: Recall:Understanding:Application - 30:50:20
- Duration: 3 hours

C. Weightage:

S.N.	Subjects	Marks
1.	Biochemistry	50
2.	Microbiology	50
3.	Hematology	20
4.	Histopathology	12
5.	Cytopathology	8
6.	General pathology	10
7.	Anatomy	14
8.	Physiology	16
9.	Basic pharmacology	8
10.	Biostatistics & research methodology	12
	Total	200

9. Master of Philosophy (MPhil) in Clinical Psychology:

A. Eligibility:

- MA/MSc degree in psychology **with clinical or counseling psychology** as special focus (papers in psychological assessment, psychopathology/ abnormal psychology, counseling/ psychotherapy) from University recognized by Government of Nepal.
- Candidate should score minimum of 50% (pass marks) in the Entrance Examinations conducted by Medical Education Commission for being eligible to be in the merit list.

B. Examination Format:

- Question type: Single best response type of multiple choice questions
- Option: Four options (A, B, C, D)
- Number of questions: 200
- Full marks: 200
- Cognitive ratio: Recall:Understanding:Application – 30:50:20
- Duration: 3 hours

C. Weightage:

S.N.	Subjects	Marks
	General Psychology	
1.	Emotion, motivation, learning	16
2.	Cognitive (sensation, perception, attention, thinking, memory, states of consciousness, thinking, intelligence, language)	16
3.	Developmental psychology (physical, cognitive, and socio-emotional development across lifespan: child, adolescence, adulthood and late adulthood)	16
4.	Social/ cross cultural psychology	16
5.	Personality and major psychological theories (psychodynamic, behavioral, humanistic/existential, cognitive etc.)	16
	Research methods in psychology and mental health	
6.	Qualitative (literature, sampling, design/method, analysis), article publishing, research ethics	20
7.	Quantitative (literature, sampling, design/method, analysis), statistics	20
	Clinical	
8.	Biological/physiological psychology	20
9.	Psychological testing/assessment	20
10.	Psychopathology/abnormal psychology	20
11.	Counseling & psychotherapy	20
	Total	200

10. Masters of Optometry (M Optom):**A. Eligibility:**

- Bachelor of Optometry (BOptom) degree or Bachelor of Optometry and Vision Science (BOptom) or Doctor of Optometry (OD) or BSc in Optometry (BSc Optom) or equivalent degree from a recognized university/institution.
- Registered as an optometrist in Nepal Health Professional Council (NHPC).
- Candidates should score a minimum 50% marks to pass entrance examinations conducted by Medical Education Commission for being eligible to be in the merit list.

B. Examination Format:

- Question type: Single best response type of multiple choice questions
- Option: Four options (A, B, C, D)
- Number of questions: 200
- Full marks: 200
- Cognitive ratio: Recall:Understanding:Application – 30:50:20
- Duration: 3 hours

C. Weightage:

S.N.	Subjects	Marks
1.	Basic science and organ systems	8
2.	Ocular anatomy and physiology	16
3.	Physical and geometrical optics	10
4.	Visual science	16
5.	Ocular diseases	16
6.	Diagnostic and investigative optometry	20
7.	Ophthalmic and dispensing optics	20
8.	Paediatric optometry and binocular vision	20
9.	Contact lens and ocular prosthesis	20
10.	Low vision and visual rehabilitation	20
11.	Community optometry	10
12.	Geriatric optometry and vision care	10
13.	Research methodology and biostatistics	8
14.	Ethics & practice management in optometry	6
	Total	200

ANNEX**List of Registered Postgraduate Medical (Health Professionals) Programs****A. Doctor of Medicine/Master of Surgery (MD/MS) Programs****Doctor of Medicine (MD)**

1. MD Anaesthesiology
2. MD Dermatology
3. MD Internal Medicine
4. MD Obstetrics and Gynaecology
5. MD Ophthalmology
6. MD Pediatrics
7. MD Psychiatry
8. MD Radiodiagnosis
9. MD/ (MD Clinical) Biochemistry
10. MD/ (MD Clinical) Pharmacology
11. MD/ (MD Clinical) Physiology
12. MD Community Medicine
13. MD Forensic Medicine
14. MD/ (MD Clinical) Microbiology
15. MD/ (MD Clinical) Pathology
16. MD Radiation Oncology
17. MD General Practice & Emergency Medicine

Master of Surgery (MS)

18. MS General Surgery
19. MS/ (MS Clinical) Anatomy
20. MS Orthopedics and Trauma Surgery
21. MS Otorhinolaryngology and Head, Neck Surgery

National Board of Medical Specialty: Postgraduate Program (NBMS-S)**B. Master of Dental Surgery (MDS)**

1. MDS Orthodontics / Orthodontics and Dentofacial Orthopedics
2. MDS Periodontology and Oral Implantology
3. MDS Prosthodontics
4. MDS Oral and Maxillofacial Surgery
5. MDS Conservative Dentistry and Endodontics
6. MDS Pedodontics and Preventive Dentistry
7. MDS Oral Medicine and Radiology
8. MDS Oral Pathology
9. MDS Community (Public Health) Dentistry

C. Doctor of Medicine (MD) in Ayurveda (*Kayachikitsa*)**D. Masters programs in Public Health (MPH)**

1. MPH (Master of Public Health)/ MSc in Public Health
2. MPH (Master in Public Health Nutrition)
3. MHPE (Master in Health Promotion and Education)/ MPH (Health Promotion and Education)
4. MPH (Public Health Service Management)

E. Master of Science (MSc) in Nursing/Masters of Nursing (MN)

1. MN/ MSc Nursing (Community Health Nursing)
2. MN/ MSc Nursing (Psychiatric Nursing)
3. MN/ MSc Nursing (Maternal Health Nursing/Women health and development)

4. MN/ MSc Nursing (Child Health Nursing/Pediatric Nursing)
5. MN/ MSc Nursing (Medical Surgical Nursing/ Adult Nursing)
6. MSc. Midwifery

F. Master in Pharmacy Programs:

1. Master of Pharmacy (MPharm)/ Master of Clinical Pharmacy/ Master of Pharmaceutical Sciences (Clinical Pharmacy)/ Master of Science (MSc) in Pharmacy
2. Master of Pharmacy (Pharmaceutical care)/ Master of Pharmaceutical Sciences (Pharmaceutics)
3. Master of Pharmacy (Industrial Pharmacy)
4. Master of Pharmaceutical Sciences (Natural Product Chemistry)

G. Master of Science in Medical Imaging Technology (MSc MIT)

H. Master of Science (MSc) in Basic Medical Science

1. MSc Clinical/Medical Microbiology
2. MSc Clinical/Medical Biochemistry

I. Master of Philosophy (MPhil) in Clinical Psychology

J. Master of Optometry (M.Optom)

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