

National Goal and Objectives of MBBS Course, Learning Outcomes/Competences of Fresh Graduates

National Goal:

To produce competent, compassionate, reflective and dedicated health care professionals who:

- consider the care and safety of their patients their first concern
- establish and maintain good relationship with patients, their attendants and colleagues
- are honest, trustworthy and act with integrity
- are capable of dealing with common diseases and health problems of the country and are willing to serve the community particularly the rural community;
- but at the same time acquire firm basis for future training, service and research at both national and international level.
- are committed to keep their knowledge and skill up-to-date through ‘Continuous Professional Development’ all through their professional life.

Objectives of MBBS Course:

At the end of the MBBS Course students shall:

1. Acquire knowledge and understanding of
 - a) the sciences upon which Medicine depends and the scientific and experimental methods;
 - b) the structure, function and normal growth and development of the human body and the workings of the mind and their interaction, the factors which may disturb these, and the disorders of structure and function which may result;
 - c) the etiology, natural history and prognosis of the common mental and physical ailments. Students must have experience of emergencies and a good knowledge of the common diseases of the community and of ageing processes;
 - d) normal pregnancy and childbirth, the common obstetric emergencies, the principles of ante-natal and post natal care, and medical aspects of family planning and psycho-sexual counseling;
 - e) the principles of prevention and of therapy, including health education, the amelioration of suffering and disability, rehabilitation, the maintenance of health in old age, and the care of the dying;
 - f) human relationships, both personal and social and the interaction between man and his physical, biological and social environment;
 - g) the organization and provision of health care in the community and in hospital, the identification of the need for it, and the economic, ethical and practical constraints within which it operates; and
 - h) the ethical standards and legal responsibilities of the medical profession.

2. Develop the professional skills necessary to

- a) elicit, record and interpret the relevant medical history, symptoms and physical signs, and to identify the problems and how these may be managed;
- b) carry out simple practical clinical procedures;
- c) deal with common medical emergencies;
- d) communicate effectively and sensitively with patients and their relatives;
- e) communicate clinical information accurately and concisely, both by word of mouth and in writing, to medical colleagues and to other professionals involved in the care of the patient; and
- f) use laboratory and other diagnostic and therapeutic services effectively and economically, and in the best interests of his patients.

3. Develop appropriate attitudes to the practice of medicine, which include

- a) recognition that a blend of scientific and humanitarian approaches is needed in medicine;
- b) a capacity for self education, so that he may continue to develop and extend his knowledge and skills throughout his professional life, and recognize his obligation to contribute if he can to the progress of medicine and to new knowledge;
- c) the ability to assess the reliability of evidence and the relevance of scientific knowledge, to reach conclusions by logical deduction or by experiment, and to evaluate critically methods and standards of medical practice;
- d) a continuing concern for the interests and dignity of his patients;
- e) an ability to appreciate the limitations of his own knowledge, combined with a willingness, when necessary, to seek further help; and
- f) the achievement of good working relationships with members of the other health care professions.

Learning Outcomes of MBBS course :

To achieve the National goal and course objectives, a set of “Essential learning outcomes / competences” which students of the medical colleges / institutes on completion of MBBS course and at the point of graduation must be able to demonstrate has been defined.

These “essential learning outcomes / competences” are grouped under three board headings:

- I The graduate with knowledge of scientific basis of Medical Practice
- II The graduate as a practitioner
- III The graduate as a professional

I. The graduate with knowledge of scientific basis of Medical Practice:

The graduate will understand and be able to apply basic bio-medical (anatomy, cell biology, genetics, physiology, biochemistry, nutrition, pathology, molecular biology, immunology, microbiology, pharmacology and community medicine) principles, methods and knowledge to

- 1.1 understand the normal processes governing homeostasis, and the mechanisms underlying the common diseases and health problems of the country.
- 1.2 understand the psychological and sociological concepts of health, illness and disease and explain psychological and sociological factors that contribute to illness, course of disease and success of treatment.
- 1.3 select appropriate investigations necessary for diagnosis of common clinical cases and explain the fundamental principles underlying such investigative procedures.
- 1.4 select appropriate treatment (including rational prescribing of drugs), management and referral (if in the patient’s best interest) plan for common clinical cases, acute medical emergencies and minor surgical procedures.
- 1.5 understand biochemical, pharmacological, surgical, psychological, social and other interventions in acute and chronic illness, in rehabilitation, and end-of-life care.
- 1.6 understand disease surveillance and prevention, health promotion including wider determinants of health, health inequalities, health risks.
- 1.7 understand communicable disease control in health care facility and community settings.
- 1.8 understand international health status, including global trends in morbidity and mortality of chronic diseases of social significance, the impact of trade and migration on health and the role of international health organizations.
- 1.9 undertake critical appraisal of diagnostic, therapeutic and prognostic trials and other quantitative and qualitative studies as reported in medical and scientific literature.
- 1.10 understand simple research questions in biomedical and population science and the design of relevant studies.

II. The Doctor as a practitioner

2.1. The graduate will have the ability to carry out a consultation with a patient (*Appendix-III*):

- 2.1.1. Obtain and record an accurate medical history, including such related issues as age, gender, and socioeconomic status.
- 2.1.2. Perform a both comprehensive and organ system specific examinations, including a mental status examination.
- 2.1.3. Elicit patients' questions, understanding of their condition and treatment options, and their views, values and preferences.
- 2.1.4. Provide explanation, advice, reassurance and support.

2.2. The graduate will have the ability to diagnose and manage clinical cases or will refer when necessary. (*Appendix I & II*):

- 2.2.1. Interpret findings from the history, physical examination and mental-state examination and make an initial assessment of a patient's problems and a differential diagnosis appreciating the processes by which such diagnosis is tested scientifically.
- 2.2.2. Construct a plan of investigation in partnership with the patient, obtaining informed consent as an essential part of this process appreciating patient's right to refuse or limit the investigation.
- 2.2.3. Interpret the results of investigations, including growth charts, x-rays and the results of diagnostic procedures in *Appendix III*.
- 2.2.4. Synthesize a full assessment of the patient's problems and define the likely diagnosis or diagnoses.
- 2.2.5. Formulate a plan for management and discharge including referrals to the right professional, according to the established principles and best evidence, in partnership with the patient, their careers and other health professional as appropriate.
- 2.2.6. Respond to patients' concerns and preferences, obtain informed consent, recognize and respect patients' right to reach decisions about their treatment and care and to refuse or limit treatment.

2.3. The graduate will have the ability to provide immediate care in medical emergencies in *Appendix IV*:

- 2.3.1. Assess and recognize the severity of a clinical presentation and need for immediate emergency care.
- 2.3.2. Provide basic first-aid and immediate life support.
- 2.3.3. Provide cardio-pulmonary resuscitation or direct other team members to carry out resuscitation.

2.4. The graduate will have the ability to prescribe drugs safely, effectively and economically. *Appendix III*:

- 2.4.1. Obtain an accurate drug history, covering both prescription and non-prescription OTC drugs including complementary and alternative medications and demonstrate awareness of the existence and range of these therapies and how this might affect other types of treatment that patient are receiving.
- 2.4.2. Formulate appropriate drug therapy and record the outcome accurately.

- 2.4.3. Recognize and respect patients' right to information about their medicines.
 - 2.4.4. Detect, manage and report adverse drug reactions.
- 2.5. The graduate will have the ability to carry out practical procedures safely and effectively. *Appendix III:***
- 2.5.1. Perform, measure and record the findings of diagnostic procedures.
 - 2.5.2. Perform therapeutic procedures.
 - 2.5.3. Demonstrate correct practice in general aspects of practical procedures.
- 2.6. The graduate will have the ability to apply principles, method and knowledge of health informatics to medical practice:**
- 2.6.1. Keep accurate, legible and complete medical records.
 - 2.6.2. Use effectively computers and other information systems, including storing and retrieving information.
 - 2.6.3. Stick to the requirements of confidentiality and data protection legislation in all dealings with information.
 - 2.6.4. Access and use effectively information sources in relation to patient care, health promotion, research and education.
- 2.7. The graduate will have the ability to communicate effectively in a medical context. (*Appendix III*):**
- 2.7.1. Communicate clearly and sensitively with patients, their relatives or other careers, and colleagues from medical and other professions by listening, sharing and responding.
 - 2.7.2. Communicate by spoken, written and electronic methods and recognize and respect significance of non-verbal communication in medical consultation.
 - 2.7.3. Communicate appropriately in difficult circumstances, such as in times of disclosing bad news and discussing sensitive issues, i.e. alcohol consumption, smoking or obesity.
 - 2.7.4. Communicate appropriately with difficult, violent patients and with mentally ill people.
 - 2.7.5. Communicate effectively in various roles, i.e. as patient advocate, teacher, manager or improvement leader.

III. The Doctor as a professional

- 3.1. The graduate will apply to medical practice ethical, moral and legal principles and will be able to :**
- 3.1.1. Recognize and respect BM&DC's ethical guidance and standards and supplementary ethical guidance that describe what is expected of all doctors registered with BM&DC.
 - 3.1.2. Demonstrate awareness of professional values which include excellence, altruism, responsibility, compassion, empathy, accountability, honesty and integrity, and a commitment to scientific methods.
 - 3.1.3. Make the care of the patient the first concern and maintain confidentiality, respect patients' dignity and privacy and act with appropriate consent.
 - 3.1.4. Respect all patients, colleagues and others regardless of their age, color, culture, disability, ethnic or national origin, gender, lifestyle, marital or parental status, race, religion or beliefs, sexual orientation or social or economic status.

- 3.1.5. Recognize patients' right to hold religious or other beliefs, and respect these when relevant to treatment options.
 - 3.1.6. Know about laws and systems of professional regulation through BM & DC and others, relevant to medical practice and complete relevant certificates and legal documents and liaise with the coroner and others as appropriate
 - 3.1.7. Use moral reasoning and decision-making to conflicts within and between ethical, legal and professional issues including those raised by economic constrains, commercialization of health care, and scientific advances.
- 3.2. The graduate will be able to reflect, learn and teach:**
- 3.2.1. Establish the foundations for lifelong learning and continuing professional development, including a professional development portfolio containing reflections, achievements and learning needs.
 - 3.2.2. Acquire, assess, apply and integrate new knowledge, learn to adapt to changing circumstances and ensure highest level of professional care to the patients.
 - 3.2.3. Recognize own personal and professional limits and seek help from colleagues and supervisors as necessary.
 - 3.2.4. Work with colleagues in ways that best serve the interests of patients, pass on information and hand over care, demonstrate flexibility, adaptability and a problem-solving approach.
 - 3.2.5. Function effectively as a mentor and teacher, contribute to the appraisal, assessment and review of colleagues and give effective feedback.
- 3.3. The graduate will be able to learn and work effectively within a multi-professional team:**
- 3.3.1. Recognize and respect the roles and expertise of health and social care professionals in the context of working and learning as a multi-professional team.
 - 3.3.2. Build team capacity and positive working relationships and undertake leadership and membership roles in a multi-professional team.
- 3.4. The graduate will have the ability to protect patient and improve care:**
- 3.4.1. Place patients' needs and safety at the center of the care process and deal effectively with uncertainty and change.
 - 3.4.2. Know about the framework of medical practice in Bangladesh including the organization, management and regulation of healthcare provision; the structures, functions and priorities of the National Health Policy; and the roles of, and relationships between the agencies and services involved in protecting and promoting individual and population health.
 - 3.4.3. Apply the principles of risk management and quality assurance to medical practice including clinical audit, adverse incident reporting and how to use the results of audit to improve practice.
 - 3.4.4. Understand own personal health needs, consult and follow the advice of a qualified professional and protect patients from any risk posed by own health.
 - 3.4.5. Recognize the duty to take action if a colleague's health, performance or conduct is putting patients at risk.

Basic Information About MBBS Course

- 1. Name of the course:** Bachelor of Medicine & Bachelor of Surgery (MBBS)
- 2. Basic qualifications & prerequisite for entrance in MBBS Course:**
 - (i) HSC or equivalent with Science.(Biology, Physics, Chemistry)
 - (ii) Candidate has to secure required grade point in the SSC and HSC examinations.
- 3. Students selection procedure for MBBS course:** According to decision by the proper competent authority as per merit.
- 4. Medium of Instruction:** English
- 5. Duration:** MBBS course comprises of 5 Years, followed by logbook based rotatory internship for one year

75 Course structure and duration

The MBBS course is divided into four phases .

Phase	Duration	Subjects	Examination
1 st phase	1½ year	Anatomy Physiology Biochemistry	First Professional MBBS
2 nd phase	1 year	Community Medicine Forensic Medicine	Second Professional MBBS
3 rd phase	1 year	Pharmacology & Therapeutics Pathology Microbiology	Third Professional MBBS
4 th phase	1½ year	Medicine & Allied subjects Surgery & Allied subjects Obstetrics and Gynaecology	Final Professional MBBS

NB: All academic activities including professional examination of each phase must be completed within the specified time of the phase.

7. Phase wise distribution of teaching-learning hours:

1st Phase

Subject	Lecture (in hours)	Tutorial	Practical	Others	Integr ated teachi ng	Formative Exam		Summative exam		Total
						Prepar atory leave	Exam time	Prepar atory leave	Exam time	
Anatomy	115	53	52	Dissection +Card exam 310	30 hrs	35 days	42 days	30 days	30 days	530
Physiolo gy	120	120	100	-						340
Biochemi stry	120	100	100	-						320
Total	355	273	252	310						1190
Behavioral science, communication skill and medical ethics will be taught through five lecturers (5 hours) within 1 st phase under supervision of Community Medicine department										5
Grand Total										1195
<i>(Time for integrated teaching, exam. preparatory leave of formative & summative assessment is common for all subjects of the phase)</i>										

2nd Phase

Subject	Lecture (in hours)	Tutorial	Practical/Demons tration	Integr ated teaching	Formative Exam		Summative exam		Total	
					Prepa ratory leave	Exam time	Prepar atory leave	Exam time		
Commun ity Medicine	110	160	COME (community based medical education):30 days (10 days day visit + 10 days RFST+ 10 days study tour)- 30 days (10+10+10)	05	15 days	15 days	15 days	20 days	275 + 30 days	
Forensic Medicine	80	55	55	05					195	
Total	190	215	55	10					470	
<i>(Time for exam. preparatory leave and formative and summative assessment is common for all subjects of the phase)</i>										

3rd Phase									
Subject	Lecture (in hours)	Tutorial	Practical	Others	Formative Exam		Summative exam		Total
					Preparatory leave	Exam time	Preparatory leave	Exam time	
Parmacology & Therapeutics	100	30	50	Clinical Pharmacology 20	10 days	15 days	10 days	15 days	200
Pathology	100	100	28	-					228
Microbiology	100	45	45	-					190
Total	300	175	123	20					618
<i>(Time for exam, preparatory leave and formative and summative assessment is common for all subjects of the phase)</i>									

4th Phase Medicine & Allied Subjects

Subject	Lecture (in hours)				Tutorial classes	Integrated teaching	Clinical (bedside teaching), in weeks			Total weeks	Block posting	Formative Exam	Summative exam
	2 nd phase	3 rd phase	4 th phase	Total			2 nd phase	3 rd phase	4 th phase				
Internal medicine	26	24	110	160	200	20 hrs.	14	06	12+2(OP D)	34	4 weeks	Preparatory leave-15 days Exam time -15 days	Preparatory leave-15 days Exam time -30 days
Psychiatry	-	-	20	20	-		-	03	-	03			
Dermatology	-	-	20	20	-		-	03	-	03			
Pediatrics	04	20	26	50	25		04	-	06	10			
Physical Medicine	-	-	05	05	-		-	02	-	02			
Emergency	-	-	-	-	-		02			02			
Total	30	44	181	255	225	20 hrs.	20	14	20	54	4 weeks		
Grand Total	500 hours						58 weeks					75 days	
<i>Time for exam, preparatory leave, formative & summative assessment is common for all subjects of the phase</i>													
Preventive aspects of all diseases will be given due importance in teaching learning considering public health context of the country and others parts of the world.													
Related ethical issues will be discussed in all clinical teaching learning													

Surgery & Allied Subjects

Subject	Lecture (in hours)				Tutoria l/Practi cal/Dem onstrati on	Integr ated teachin g	Clinical/Bedside teaching (in week)			Total Weeks	Block posting	Formative Exam	Summative Exam
	2 nd Phase	3 rd Phase	4 th Phase	Total			2 nd Phase	3 rd Phase	4 th Phase				
General Surgery	35	30	60	125	200	20	12+4	-	6	22	4 wks	Preparatory leave -15 days Exam time –15 days	Preparatory leave -15 days Exam time –30 days
Orthopaedics	5	10	30	45			-	4	4	8			
Radiology	-	-	5	5			1	-	-	1			
Radiotherapy	-	-	8	8			-	1	-	1			
Transfusion medicine	-	5	-	5			1	-	-	1			
Anesthesia	-	10	-	10			1	-	-	1			
Neurosurgery	-	2	5	7			-	1	-	1			
Pediatric Surgery	-	5	10	15			-	-	2	2			
Urology	-	5	10	15			-	-	2	2			
Bum Plastic Surgery	3	-	2	5			-	-	1	1			
Emergency & casualty	-	-	-	-			-	-	1	1			
Dentistry	-	-	-	-			1	-	-	1			
Ophthalmology	-	40 hrs		40			-	4	4	8			
Otolaryngology	-	40 hrs		40			-	4	4	8			
Total	300 hrs				200	20	20 wks	14 wks	24 wks	58wks	4wks		
Grand total	520 hours						62 weeks					75 days	

(Time for exam. preparatory leave and formative & summative assessment is common for all subjects of the phase)

Preventive aspects of all diseases will be given due importance in teaching learning considering public health context of the country and others parts of the world.

Related ethical issues will be discussed in all clinical teaching learning

Obstetrics & Gynaecology

Lecture		Tutorial / Demonstr ation	Integrated Teaching	Total hours	Clinical bed side teaching in 3 rd & 4 th phase	Block placement	Formative Exam		Summative exam	
3 rd Phase	4 th Phase						Preparator y leave	Exam time	Prepa ratory leave	Exam time
30 hrs	70 hrs	85 hrs	15hrs	200 hrs	16 weeks (8+8)	4 weeks	15 day	15 day	15 day	30 day

(Time for exam. preparatory leave and formative & summative assessment is common for all subjects of the phase)

Preventive aspects of all diseases will be given due importance in teaching learning considering public health context of the country and others parts of the world.

Related ethical issues will be discussed in all clinical teaching learning

8. Teaching & learning methods

The following teaching and learning methods will be followed:

Large Group Teaching:

- Lecture
- Seminar

Small Group Teaching:

- Tutorial
- Demonstration
- Students interaction
- Problem Based Learning (PBL)

Practical session:

- Use of practical manual
- Performing the task/examination by the student
- Writing the practical note book

Field Placement (Community based medical education):

- In small groups for performing activities by the student themselves

Clinical teaching:

- In ward, OPD, OT, POW, ED, ICU, etc.
- By concerned persons

Integrated teaching

Encourage to learn ICT through computer lab of the college.

9. Assessment:

- A. There will be in-course (card/item/term) and end-course (professional) assessment for the students in each phase (1st, 2nd, 3rd & 4th phase) of the course i.e. formative and professional examination.
- B. Formative assessment will be done through results of items, card and term ending examination & class attendance.
- C. For formative assessment, 10 % marks of written examination of each paper of each subject is allocated
- D. For MCQ of each paper, 20% marks are allocated. There will be separate answer script for MCQ part of examination. Total number of MCQ will be 20.
- E. For SAQ of each paper, 70% marks are allocated
- F. Oral part of the examination will be structured
- G. OSPE / OSCE will be used for assessing skills/competencies. Traditional long & short cases will be also used for clinical assessment
- H. There will be phase final professional examination within the each academic phase.

I. Eligibility for appearing in the professional examination:

- Certificate from the respective head of departments regarding students obtaining at least 75% attendance in all classes (theory, practical, tutorial, residential field practice, clinical placement etc.) during the phase.
- Obtaining at least 60% marks in examinations.
- No student shall be allowed to appear in the professional examinations unless the student passes in all the subjects of the previous professional examinations

J. Pass Marks:

Pass marks is 60%. Student shall have to pass written (MCQ + SAQ + formative), oral, practical and clinical examination separately.

K. Examinations & distribution of marks:

First Professional Examination

Subjects	Written Exam marks	Struct ured Oral Exam marks	Practical Exam marks		Formative Exam marks	Total Marks
			Soft part	Hard part		
Anatomy	180	150	75	75	20	500
Physiology	180	100	100		20	400
Biochemistry	180	100	100		20	400
Total						1300

Second Professional Examination

Subjects	Written Exam marks	Structu red Oral Exam marks	Practical Exam marks	Formative Exam marks	Total Marks
Community Medicine	90	100	100	10	300
Forensic Medicine	90	100	100	10	300
Total					600

Third Professional Examination

Subjects	Written Exam marks	Structu red Oral Exam marks	Practical Exam marks	Formative Exam marks	Total Marks
Pharmacology & Therapeutics	90	100	100	10	300
Pathology	90	100	100	10	300
Microbiology	90	100	100	10	300
Total					900

Fourth Professional Examination

Subjects	Written Exam marks	Struc tured Oral Exam marks	Clinical	Practical	Formative Exam marks	Total Marks
Medicine & Allied Subject	180	100	100	100	20	500
Surgery & Allied Subject	180	100	100	100	20	500
Obstetrics & Gynecology	180	100	100	100	20	500
Total						1500

L. Common Rules for Examinations

- a) University professional examination to be started from May and November.
- b) University professional examinations will be completed within the specified time of the concerned phase
- c) No carry on system before passing 1st professional examination
- d) After passing 1st professional examination students can appear for 2nd professional examinations if all other prerequisites for 2nd professional examination are fulfilled. In the mean time students can attend clinical ward placement, teaching learning.
- e) To appear 3rd professional examination students have to pass all the subjects of previous 2nd professional examination if all other prerequisites are fulfilled. In the mean time students can attend clinical ward placement, teaching learning. Students can also attend the classes of subjects of 4th phase
- f) To appear 4th (Final) professional examination students have to pass all the subjects of previous 3rd professional examination if all other prerequisites are fulfilled. In the mean time students can attend clinical ward placement, teaching learning.

M. Few directives and consensus about the following issues of assessment:

- i. In case of OSPE/OSCE- Instruments/equipments to be taken to oral boards to ask open questions to the students apart from Structured Oral Examination (SOE). There will be scope of instruments related viva, specially in clinical subjects and where applicable. Central OSPE/OSCE from Dean Office after moderation will be encouraged.
- ii. In case of Structured Oral Examination (SOE), instead of preparing specific structured question, topics will be fixed considering wide range of contents coverage. Rating scale will be used for marking the students concurrently. Each student will be asked questions from all topics of the set. Equal or average duration of time will be set for every student.

10. Internship :

After passing final professional MBBS examination students have to enroll for one year log book based rotatory internship programme. Within this one year 11 months and 15 days at medical college hospital and 15 days at UHC. Internship programme will be more structured and supervised. It is compulsory to complete Internship Training Programme designed by BM&DC to get permanent registration for doing independent practice.