

Faculty of Medicine
MBBS Program
Integrated Modular Medical Curriculum
2019

Program Specifications for MBBCh

I. Basic information

Program Title: Bachelor of Medicine and Surgery (MBBCh)

Program Type: Single

Departments sharing in the program delivery:

Human anatomy and Embryology, Histology, Medical Physiology, Medical Biochemistry, Pathology, Medical Pharmacology, Medical Microbiology and Immunology, Parasitology, Ophthalmology, Ear-Nose-Throat , Forensic Medicine and Clinical Toxicology, Community Medicine, Pediatrics, Obstetrics and Gynaecology, Psychiatry, Radiology, Internal Medicine with its subspecialties and General Surgery with its subspecialties.

Coordinator: Vice Dean of Education and Student Affairs.

Program specifications approval by: Faculty Council.

II. Professional information

II-.A. Aim of the program:

The aim of the undergraduate medical education program is to provide the graduates with general professional competencies that meet the expectations of the community and that serve as the foundation for a process of lifelong learning and professional development of the medical graduate. It provides the graduate with:

1. A core body of scientific knowledge, skills and attitudes essential for the practice in medicine.
2. Diagnostic, problem solving and decision-making skills necessary for proper evaluation and management of common diseases and emergencies.
3. Awareness and participation in the social and community aspects of health care.
4. Appropriate ethical and professional skills necessary for establishment of excellent communication with patients and colleagues.

5. Lifelong learning competencies necessary for continuous professional development.
6. Research methodology as related to medical practice.

II-B. Academic standards

- The Program competencies and courses intended learning outcome are developed according to the National Academic Reference Standards (NARS) for Bachelor degree of medicine published by the National Authority for Quality Assurance and Accreditation of Education (NAQAAE) (2017).
- General Medical Council- UK, Outcomes for graduates (Tomorrow's Doctors) 2015.

II-C. Competencies to be acquired at the end of the program:

At the end of the program, the graduate should be able demonstrate the following competencies:

Competency Area 1: The graduate as a health care provider

The graduate should provide quality, safe, patient-centered care, drawing upon his/her integrated knowledge and clinical skills, and adhering to professional values. The graduate should collect and interpret information, make clinical decisions, and carry out diagnostic and therapeutic interventions with an understanding of the limits of his/her expertise- considering the patient's circumstances and preferences as well as the availability of resources. The graduate should be able to:

- 1.1. Take and record a structured, patient centered history.
- 1.2. Adopt an empathetic and holistic approach to the patients and their problems.
- 1.3. Assess the mental state of the patient.
- 1.4. Perform appropriately timed full physical examination of patients adjusted to the age, gender, and clinical presentation of the patient while being culturally sensitive.
- 1.5. Prioritize issues to be addressed in a patient encounter.
- 1.6. Select the appropriate investigations and interpret their results taking into consideration cost/effectiveness factors.
- 1.7. Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice.
- 1.8. Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.

- 1.9. Retrieve, analyze, and evaluate relevant and current data from literature, using information technologies and library resources, in order to help solve a clinical problem based on evidence (EBM).
 - 1.10. Integrate the results of history, physical and laboratory test findings into a meaningful diagnostic formulation.
 - 1.11. Perform diagnostic and intervention procedures in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances.
 - 1.12. Adopt strategies and apply measures that promote patient safety.
 - 1.13. Establish patient-centered management plans in partnership with the patient, his/her family and other health professionals as appropriate, using Evidence Based Medicine in management decisions.
 - 1.14. Respect patients' rights and involve them and /or their families/carers in management decisions.
 - 1.15. Provide the appropriate care in cases of emergency, including cardio-pulmonary resuscitation, immediate life support measures and basic first aid procedures.
 - 1.16. Apply the appropriate pharmacological and non-pharmacological approaches to alleviate pain and provide palliative care for seriously ill people, aiming to relieve their suffering and improve their quality of life.
 - 1.17. Contribute to the care of patients and their families at the end of life, including management of symptoms and practical issues of law and certification.
- (Annex 1)**

Competency Area 2: The graduate as a health promoter

The graduate should advocate for the development of community and individual measures which promote the state of well-being, he/she should empower individuals and communities to engage in healthy behaviors, and put his/her knowledge and skills to prevent diseases, reduce deaths and promote quality life style. The graduate should be able to:

- 2.1 Identify the basic determinants of health and principles of health improvement.
- 2.2 Recognize the economic, psychological, social, and cultural factors that interfere with wellbeing.
- 2.3 Discuss the role of nutrition and physical activity in health.
- 2.4 Identify the major health risks in his/her community, including demographic, occupational and environmental risks; endemic diseases, and prevalent chronic diseases.
- 2.5 Describe the principles of disease prevention, and empower communities, specific groups or individuals by raising their awareness and building their capacity.

- 2.6 Recognize the epidemiology of common diseases within his/her community, and apply the systematic approaches useful in reducing the incidence and prevalence of those diseases.
- 2.7 Provide care for specific groups including pregnant women, newborns and infants, adolescents and the elderly.
- 2.8 Identify vulnerable individuals that may be suffering from abuse or neglect and take the proper actions to safeguard their welfare.
- 2.9 Adopt suitable measures for infection control.

Competency Area 3: The graduate as a professional

The graduate should adhere to the professional and ethical codes, standards of practice, and laws governing practice. The graduate should be able to:

- 3.1. Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.
- 3.2. Adhere to the professional standards and laws governing the practice, and abide by the national code of ethics issued by the Egyptian Medical Syndicate.
- 3.3. Respect the different cultural beliefs and values in the community they serve.
- 3.4. Treat all patients equally, and avoid stigmatizing any category regardless of their social/religious, cultural, ethnic backgrounds, or their special needs.
- 3.5. Ensure confidentiality and privacy of patients' information.
- 3.6. Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors.
- 3.7. Recognize and manage conflicts of interest.
- 3.8. Refer patients to appropriate health facility at the appropriate stage.
- 3.9. Identify and report any unprofessional and unethical behaviors or physical or mental conditions related to himself, colleagues or any other person that might jeopardize patients' safety.

Competency Area 4: The graduate as a scholar and scientist

The graduate should build his clinical practice on a base of knowledge of scientific principles and methods of basic medical and social sciences, applying this knowledge into clinical care, and using it as a foundation for clinical reasoning, care provision, further professional development and research. The graduate should be able to:

- 4.1 Describe the normal structure of the body and its major organ systems and explain their functions.
- 4.2 Explain the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.

4.3 Recognize and describe main developmental changes in humans and the effect of growth, development and aging on the individual and his family.

4.4 Explain normal human behavior and apply theoretical frameworks of psychology to interpret the varied responses of individuals, groups and societies to disease.

4.5 Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).

4.6 Describe altered structure and function of the body and its major organ systems that are seen in various diseases and conditions.

4.7 Describe drug actions: therapeutics and pharmacokinetics; side effects and interactions, including multiple treatments, long term conditions and non-prescribed medication; and effects on the population.

4.8 Demonstrate basic sciences specific practical skills and procedures relevant to future practice, recognizing their scientific basis, and interpret common diagnostic modalities, including: imaging, electrocardiograms, laboratory assays, pathologic studies, and functional assessment tests.

Competency Area 5: The graduate as a member of the health team and a part of the health care system

The graduate should work and collaborate effectively with physicians and other colleagues in the health care professions, demonstrating an awareness of and a respect for their roles in delivering safe, effective patient- and population-centered care. He/she should be committed to his/her role as a part of health care system, respecting its hierarchy and rules and using his/her administrative and leadership skills to add value to the system. The graduate should be able to:

5.1 Recognize the important role played by other health care professions in patients' management.

5.2 Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.

5.3 Implement strategies to promote understanding, manage differences, and resolve conflicts in a manner that supports collaborative work.

5.4 Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system.

5.5 Communicate effectively using a written health record, electronic medical record, or other digital technology.

5.6 Evaluate his/her work and that of others using constructive feedback.

- 5.7 Recognize own personal and professional limits and seek help from colleagues and supervisors when necessary.
- 5.8 Apply fundamental knowledge of health economics to ensure the efficiency and effectiveness of the health care system.
- 5.9 Use health informatics to improve the quality of patient care.
- 5.10 Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements.
- 5.11 Improve the health service provision by applying a process of continuous quality improvement.
- 5.12 Demonstrate accountability to patients, society, and the profession.

Competency Area 6: The graduate as a lifelong learner and researcher

The graduate should demonstrate a lifelong commitment to excellence in practice through continuous learning and professional development. He should reflect on his own performance, and plan for his own development making use of all possible learning resources. The graduate should have an inquisitive mind and adopt sound scientific research methodology to deal with practice uncertainty and knowledge gaps and to contribute to the development of his profession as well as for the purpose of his own academic development. The graduate should be able to:

- 6.1 Regularly reflect on and assess his/her performance using various performance indicators and information sources.
- 6.2 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice
- 6.3 Identify opportunities and use various resources for learning.
- 6.4 Engage in inter-professional activities and collaborative learning to continuously improve personal practice and contribute to collective improvements in practice.
- 6.5 Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that address them.
- 6.6 Effectively manage learning time and resources and set priorities.
- 6.7 Demonstrate an understanding of the scientific principles of research including its ethical aspects and scholarly inquiry and contribute to the work of a research study.
- 6.8 Critically appraise research studies and scientific papers in terms of integrity, reliability, and applicability.
- 6.9 Analyze and use numerical data including the use of basic statistical methods.
- 6.10 Summarize and present to professional and lay audiences the findings of relevant research and scholarly inquiry.

6.11 Identify locally prevalent health problems and use research methods and integrated project plans to improve the health outcomes of the community.

II-D. Program Structure and Contents

1. Program duration:
 - Five academic years followed by two years hospital clinical training as house officer, according to new by-laws of The Supreme Council of Higher Education.
 - The five academic years formed of 10 semesters:
 - o In the pre-clinical years (2.5 years/5 semesters): each year is formed of 32 academic weeks (14 weeks/semester and 2 weeks for examination).
 - o In the clinical years (2.5 years/5 semesters): each year is formed of 34 weeks (15 weeks/semester and 2 weeks for examination).
 - o The academic week equals 5 days and each day equals 6 teaching hours.
2. The Program's Credit Points
 - The faculty adopts the credit point system of European credit transfer and accumulation system.
 - Students should complete 60 points/year with a total of 300 credit points in the five academic years.
 - Each credit point equals 25 hours, so that the student fulfills 1500 hours/year.
3. The program's courses: illustrated in the table below

Course	Code	Semester/Year	Credit points	Teaching duration		Allocated marks
				Hours	Weeks	
First stage (2.5 years)						
Introduction to biomedical science	IBS 1-1	1 st sem 1 st yr	18	450	10	360
Systems in medicine (3 years)	Each has its code	2 nd -5 th sem 1 st -3 rd yr	87	2175	46	1740
Hematopoietic system and fundamentals of immunology	HEM 4-1	1 st sem 1 st yr	8	200	4	160
The science of infection and infectious diseases	MID 10-2	1 st sem 2 nd yr	7	175	4	140
Therapeutics and prescription	TAP 14-3	1 st sem 3 rd yr	4	100	2	80
Introduction to clinical practice	ICP 15-3	1 st sem 3 th yr	6	150	4	120
Clinical diagnostics	CLD 28-1/5	Years 1-2.5	3	75		60
Research, informatics and Evidence based medicine, medical terminology	RIE 29-1/5	Years 1-2.5	3	75		60
Professionalism	PIM 30-1/5	Years 1-2.5	3	75		60
University requirements		Years 1-2	10	250		-
Total (first stage)			149	3725	70	
Second stage (2.5 years)						
Forensic medicine	FRM 16-3	2 nd sem 3 th yr	5	125	3	100
Clinical toxicology	CLT 17-3	2 nd sem 3 th yr	5	125	3	100
ENT	ENT 18-3	2 nd sem 3 th yr	8	200	4	160

Ophthalmology	OPH 19-3	2 nd sem 3 th yr	8	200	4	160
Pediatrics	PED 20-4	1 st sem 4 th yr	16	400	10	320
Public health	PUB 21-4	1 st sem 4 th yr	8	200	4	160
Family medicine	FAM 22-4	1 st sem 4 th yr	2	50	1	40
Obstetrics and Gynecology	OBG 23-4	2 nd sem 4 th yr	16	400	10	320
Tropical medicine	TRP 24-4	2 nd sem 4 th yr	4	100	2	80
Critical Care and Emergency medicine	CCE 25-4	2 nd sem 4 th yr	7	150	3	140
Internal medicine	MED 26-5	5 th yr	26	650	15	520
General surgery	SUR 27-5	5 th yr	26	650	15	520
Clinical diagnostics	CLD 28-1/5	Years 2.5-5	2	50		40
Research, informatics and Evidence based medicine, medical terminology	RIE 29-1/5	Years 2.5-5	2	50		40
Professionalism in medicine	PIM 30-1/5	Years 2.5-5	2	50		40
Electives (two)		All years	10	250		
University requirements		Year 3	5	125		
Total (2nd stage)			151	3775	74	

University Requirements (Pass or Fail – No marks in total summative score)

Code	Course Name	Credit Points
MGT101	Principles of Management	2
HUM101	Humanities	2
REM101	Scientific Thinking	2
ETS401	Ethics	1
ENG111-113	English Levels 1-3	5
A-CS111-113	Aptech - Computer Skills - Levels 1-3	3

4. Elective courses included in the program are: introduction to Art, introduction to music, health services management, history of medicine, introduction to photography, computer programming, quality control, German language Level 1, and German language Level 2. The student should choose 2 of them throughout the years of the study and should pass the 2 courses before graduation.

Code	Course name
ART 31	Introduction to Art
MUS 32	Introduction to Music
HOM 33	History of medicine
HLM 34	Health services management
PHO 35	Introduction to photography
COM 36	Computer Programming
QUA 37	Quality Control
GRB 38	German Language Level 1
GRA 39	German Language Level 2

5. ACE – Aptech Computer Education

There is a large demand in the market place today for skilled individuals who possess the technical expertise in IT sector. In fact, the world as we know today would not exist without the help of computer and Web aided business. Realizing that, NUB introduced Aptech Computer Education into the university requirements. This is a non-credit program for NUB to be delivered across 6 semesters starting students' first academic year.

II- E. Teaching methods

The program comprises a variety of teaching methods designed to ensure qualification of the student as an efficient medical practitioner who is capable of taking responsibility for life-long learning throughout the medical career. The teaching methods used include:

- Problem-based learning: each module has a number of clinically related problems that will define the specific objectives of the module.
- Interactive lectures.
- Small group work to study the clinical problems or to work on assignments.
- Hands-on training in laboratories.
- Hands-on training in clinical skills laboratory.
- Hospital visits for training under supervision of clinical tutors.
- Self-study.
- E-learning instructions.

II-F. Teaching and learning facilities

- Lecture halls.
- Rooms for small group work.
- Laboratories for all basic sciences requirements including labs for Biochemistry , Physiology, Pharmacology, Pathology, Histology....etc
- Lab. For anatomy
- Clinical skills lab.
- Digital library.
- Computer lab.
- Pathology museum.
- E-learning instructions.

II-G. Mentorship

A formal mentoring program is adopted in our NUB MBBS program. Mentors are academic faculty members who provide academic support to medical students, professional and academic development, and can simultaneously identify students who need additional social, psychological, health, and financial support. Mentors can refer these students to the student support unit, which provides special services such as psychological or health support. Each mentor

is responsible for 10 students. Regular meetings between the mentors and mentees are scheduled by administrative assistants.

II-H. Program admission requirements

- Candidates must be able to satisfy the general admissions criteria of the Nahda University and the Supreme Council of Higher Universities and the Ministry of Higher Education.
- Egyptian students must achieve a score in secondary education (Thanawia Ammaa) to qualify them to enter the Nahda University, Faculty of Medicine, or to be accepted through the national office for transfer of equivalent degrees. Priority is given to students with highest Grades. Only Excellent or Very good grade levels are accepted.
- Foreign students must be accepted by the Waffedin Office in Egyptian Ministry of Higher Education and approved by their own embassy in Cairo.
- English language is mandatory for the first three years as per requirements of Al Nahda University.
- NUB is committed to developing the student knowledge and skills sets so that the graduates are job ready at graduation. NUB, in association with Aptech Learning and Training Academy Ltd., India, for the first time in academic year 2017-18, introduced accredited English courses as university requirement across all faculties. The courses are obligatory for students starting their first year at NUB, and are taught across three academic years, six semesters. A total of 4 credit points is allocated to this programme over the whole duration of the programme.

II-I. Regulations for progression and program completion

- The student can sit for the final exam of each module at the end of the semester (that included the module) only after 75% attendance of the specified educational activities of all scientific components in the module (lectures, practical, small group work, and assignment).
- If the student fails in one module, he/she will be allowed to sit for make-up exam (max. grade 60%). If he fails the make-up exam, he should attend the the summer course and re-enter the exam (max. grade 100%). If he fails summer course exam, he will be allowed to re-enter the exam with max. garde 60%.
- The student should pass all modules of the first stage (first 5 semesters) to be allowed to enroll into the second clinical stage.
- **Requirement for graduation:**

- The student should pass the all the obligatory and elective modules of the program with at least 60% of the total grades allocated for each module. He should also fulfill the university requirements (E and IT courses).
- The student should complete the 2-year clinical training in the Nahda University hospital or any hospital approved by the faculty to get practice license.

II-J Methods for Assessment

- **Formative assessment (ongoing Assessments):** Formative assessment has the objective of corrective actions for the students' learning curve and to ensure that all specified competencies and educational objectives are attained.
- **Mid-year assessment:** 30% of the total mark will be awarded to the student's activity in the class as well as his/her presentations in addition to a mid-semester MCQ exam and assignments. The schedule of these assessments is announced to the students at the start of each module.
- **Final examination (written, practical, VIVA):** 70% of the total marks (40% for written exam, and 30% for practical exam), and will be carried at the end of each module. It comprises the following assessment activities:

TOOL	ILOs covered
Written exam (SAQs, MCQs, EMQs, Problem solving)	Assessment of cognitive skills (knowledge and understanding, and critical thinking skills)
OSPE/OSCE exam	Assessment of practical and clinical skills, Professional skills, and attitude.
VIVA (oral)	Assessment of cognitive and professional skills
Log book (house officer training)	Assessment of application of knowledge, critical thinking, practical and clinical skills, Professional skills, ethics, and attitude.

II-K. Grading system

Grade	Letters	Percentage (%)
Excellent	A+	95-100%
	A	90 - <95%
	A-	85 - <90%
Very good	B+	80 - <85%
	B	75 - <80%
Good	C+	70 - <75%
	C	65 - <70%
Acceptable	D	60 - <65%
Failure	F*	<60

II-L. Evaluation of Program

The evaluators	Tools	Sample
1. Senior students	Questionnaire Meetings	Sufficient sample
2. Alumni	Questionnaire Meetings	Sufficient sample
3. Faculty Staff	Questionnaire Meetings	Sufficient sample
4. Stakeholders	Questionnaire Meetings	Sufficient sample
5. External Evaluator	Reports	Once/year
6. Internal Evaluators	Frequent report from the quality unit of the faculty	With each semester

Annex 1: practical skills to be acquired by the students at the end of the program

a. Fundamental physical examination skills:

	Skills
1.	Measuring body temperature
2.	Measuring pulse rate, respiratory rate and blood pressure
3.	Anthropometric Measurements and assessment of nutritional status
4.	Chest examination
5.	Heart examination
6.	Abdominal examination
7.	Locomotor system examination
8.	Nervous system examination
9.	Examination of the jugular veins
10.	Ear examination
11.	Throat examination
12.	External Eye and fundus examination
13.	Breast examination
14.	Examination of the thyroid
15.	Lymph nodes examination
16.	PV examination
17.	Assessment of uterine fundus level in pregnancy
18.	PR examination
19.	Examining lumps

b. Diagnostic and intervention procedures skills

Skills	
1.	Performing venipuncture and collect blood samples.
2.	Inserting a cannula into peripheral veins.
3.	Establishing peripheral intravenous access and setting up an infusion; use of infusion devices
4.	Giving intramuscular, subcutaneous, intradermal and intravenous injections.
5.	Suturing of superficial wounds.
6.	Performing cardiopulmonary resuscitation and basic life-support
7.	Performing and interpreting basic bedside laboratory tests
8.	Performing and interpreting ECG
9.	Managing an electrocardiograph (ECG) monitor
10.	Taking swabs for different diagnostic purposes
11.	Using a nebulizer for administration of inhalation therapy
12.	Performing male and female bladder catheterization
13.	Administering basic oxygen therapy
14.	Wound care and basic wound dressing
15.	Managing Blood transfusion
16.	Inserting a nasogastric tube.
17.	Administering local anesthetics
18.	Performing the procedure of normal labor

c. Practical skills

	Skills
1.	Dissecting the different parts and organs of the human body
2.	Performing Biochemical and microscopic urine and stool analysis
3.	Performing basic biochemical blood tests
4.	Preparing urine and stool specimen for microscopic examination
5.	Identification of parasites and parasitic ova under the microscope
6.	Identification of different normal tissue sections under the microscope
7.	Identification of different pathological alterations in tissue sections under the microscope
8.	Identification of gross pathological alterations in different body organ specimens
9.	Determining blood group and performing cross matching and computability tests
10.	Preparing and examining blood films and assessing hemoglobin value in a blood sample
11.	Obtaining and handling a blood sample for culture
12.	Performing and interpreting basic respiratory function tests.
13.	Identifying different bacteria and fungi under the microscope
14.	Differentiating different bacterial growth in culture

Curriculum Map for Undergraduate Medical Program

First semester								Second semester								
Weeks	2	4	6	8	10	12	14	2 wks	17	20	22	24	26	28	30	2 wks
First year	Introduction to biomedical sciences (10 wks)					Hematopoietic system and immunology (4 wks)		Exams	Loco-motor system and skin (7wks)			CVS (7 wks)				Exams
	Professionalism								in medicine (1)							
	Research, informatics,								EBM (1)							
	Clinical diagnostics (1)								University Requirements (as Computer & English)							
Second year	Respiratory system (4 wks)		Science of Infections and infectious diseases (4wks)		Hepatology and GIT (6 wks)			Exams	Nutrition and metabolism (2wk)	Reproductive System (4 wks)		Neuro- psychology (8 wks)				Exams
	Professionalism								in medicine (2)							
	Research, informatics,								EBM (2)							
	Clinical diagnostics (2)								University Requirements (as Computer & English)							
Third year	Endocrine (2 wks)	Spec.senses (2 wks)	Nephrology and urology (4 wk)		Therapeutics (2 wks)	Introduction to clinical practice (4 wks)		Exams	Forensic medicine (3 wks)	Clinical toxicology (3 wks)	ENT (4 wks)		Ophthalmology (4 wks)		Exams	
	Professionalism								in medicine (3)							
	Research, informatics,								EBM (3)							
	Clinical diagnostics (3)								University Requirements (as Computer & English)							

First semester									Second semester									
Week	2	4	6	8	10	12	14	15	2 wks	18	20	22	24	26	28	30	32	2 wks
Fourth year	Pediatrics (10 wks)					Public health (4 wks)		Family M (1 wk)	Exams	Obs. & Gyn (10 wks)					Tropical (2 wk)	ICU & emergency (3 wks)		Exams
	Professionalism									in medicine (4)								
	Research, informatics,									EBM (4)								
	Clinical diagnostics (4),									Electives (1)								
Fifth year	Internal medicine with rotation in subspecialties (15 wks)								Exams	General surgery with rotation in subspecialties (15 wks)								Exams
	Professionalism									in medicine (5)								
	Research, informatics,									EBM (5)								
	Clinical diagnostics (5),									Electives (2)								