



بسم الله الرحمن الرحيم  
الجمهورية اليمنية  
جامعة صنعاء-كلية الطب والعلوم الصحية  
وحدة ضمان الجودة



# **Sana'a University**

## **Faculty of Medicine and health sciences**

### **Program Specification for Bachelor of Medicine and surgery MBBS**

**(2024/2025)**

**According to bylaw 2016  
And its amendments**



## Contents

No.	Subject	Page
1	<ul style="list-style-type: none"><li>• Vision and Mission of faculty</li><li>• Mission of the program</li><li>• Matrix of program and faculty mission</li><li>• Matrix of program mission, aims and NARS attributes of Yemen</li></ul>	
2	<b>1. Basic Information</b>	
3	<b>2. Specific Information:</b> 1. General Program Aims 2. Intended Learning Outcomes (ILOs) of the Program 3. Academic Standards for the Program 4. Benchmark (Reference standards) 5. Program Structure and Contents 6. Courses Contents and specifications 7. Program Admission and transfer Requirements 8. Regulations for Progression and Program Completion 9. Teaching and learning methods Vs ILOs 10. Assessment methods of Students Vs ILOs 11. Evaluation of the Program	
4	<b>3. Appendices:</b> <ul style="list-style-type: none"><li>• Appendix (1): NARS of medical Program 2018 in Yemen</li><li>• Appendix (2): Matrix of program and NARS:<ul style="list-style-type: none"><li>- Matrix of Program Aims vs. NARS Attributes</li><li>- Matrix of Program ILOs vs. NARS ILOs</li></ul></li><li>• Appendix (3): Matrix of Program Aims vs. Program ILOs</li><li>• Appendix (4): Matrix of Program ILOs vs. Courses</li><li>• Appendix (5): Courses Specifications</li></ul>	separate



## Faculty vision and mission and program mission

### Faculty Vision

الريادة في المجال الصحي محلياً وتميز إقليمياً والمنافسة دولياً  
Leadership in the health field locally, regionally, and internationally

### Faculty Mission

تلزם كلية الطب والعلوم الصحية جامعة صنعاء بإعداد خريج مؤهل يتمتع بالمعرفة والمهارات المعاكبة لاحتياجات المجتمع وملزماً بأخلاقيات المهنة وقدراً على العمل في مختلف مجالات الرعاية الصحية الأولية والمنافسة محلياً وإقليمياً ودولياً، وتلتزم بتوفير بيئة تعليمية وبحثية إبداعية وشراكة مجتمعية فعالة للمساهمة في حل المشكلات الصحية واهداف التنمية المستدامة.

The Faculty of Medicine and Health Sciences, Sana'a University, is committed to prepare a well-qualified graduate who has the knowledge and skills that meets community needs, committed to professional ethics, able to work in various areas of primary health care, compete locally, regionally, and internationally, and is committed to provide a creative educational and research environment and an effective community partnership to contribute to solving health problems and sustainable development goals.

### Program Mission

يلتزم برنامج الطب والجراحة بكلية الطب والعلوم الصحية جامعة صنعاء بتخريج أطباء أكفاء في المجالات المختلفة للرعاية الصحية الأولية بما يواكب متطلبات سوق العمل محلياً وإقليمياً ودولياً، وتنمية مهارات البحث العلمي والتعلم المستمر بما يسهم في خدمة المجتمع مع الالتزام بأخلاقيات المهنة.



The Medicine and Surgery Program at the Faculty of Medicine and Health Sciences, Sana'a University, is committed to graduating competent doctors in various fields of primary health care in line with the requirements of the labour market locally, regionally and internationally, and developing scientific research skills and continuous learning in a way that contributes to community service while adhering to professional ethics.

### Matrix of program and faculty mission

Aspects of consistency	Program Mission	Faculty mission
	The Medicine and Surgery Program at the Faculty of Medicine and Health Sciences, Sana'a University, is	The Faculty of Medicine and Health Sciences, Sana'a University, is
<b>Educational aspect</b>	committed to graduating competent doctors in various fields of primary health care	committed to prepare a well-qualified graduate who has the knowledge and skills that meets community needs, able to work in various areas of primary health care,
<b>Competition level</b>	in line with the requirements of the labour market locally, regionally and internationally,	compete locally, regionally, and internationally,
<b>Scientific research aspect</b>	and developing scientific research skills and continuous learning	and is committed to provide a creative educational and research environment
<b>Community service aspect</b>	in a way that contributes to community service	and an effective community partnership to contribute to solving health problems and sustainable development goals.
<b>Moral and ethical aspect</b>	while adhering to professional ethics.	committed to professional ethics,



### Matrix of Program Mission and aims versus NARS Graduate Attributes

NARS Graduate Attributes of Yemen	Program Mission				Program aims												
	Educational aspect	Scientific research aspect	Community service aspect	Moral and ethical aspect	1	2	3	4	5	6	7	8	9	10	11	12	13
1	✓				✓												
2	✓		✓			✓	✓										
3	✓							✓									
4			✓						✓								
5				✓						✓							
6	✓										✓						
7	✓											✓					
8	✓												✓				
9	✓	✓											✓	✓			
Bench mark	✓	✓														✓	
Bench mark	✓	✓	✓														✓



## A. Basic Information

- 1. Program Title:** Bachelor of Medicine and Surgery (MBBS)
- 2. Program Type:** Single
- 3. Date of program approval:** Academic year 1982/1983 and updated by law 2016 to be implemented 2016/2017 batch 34, with amendments on 2019/2020 batch 37, and 2023/2024 batch 41.
- 4. Departments sharing in the program:**
  - Anatomy and Histology, Physiology, Biochemistry, Microbiology, Parasitology, Pharmacology, Pathology, Community Medicine, Paediatrics, Internal Medicine, Surgery, Obstetrics and gynaecology, Forensic Medicine and Toxicology, Dermatology, Radiology, Ear, Nose and Throat, Ophthalmology
- 5. Date of Program Specification adoption:** Faculty Council No. 7 (29 June 2024)
- 6. Program coordinator:** Prof. Dr. Nora Kasem Elsagheer
- 7. Internal reviewer:** Prof. Dr. Saleh Bahaj
- 8. External reviewer:** Prof. Dr. Ibrahim Sadek Moustafa Elgendi, Faculty of Medicine, Benha University, Egypt :Expert in Quality of Medical Education and Strategic Planning, World Health Organization.

## B. Professional Information

### 1. Program Aims

The aim of the program is to provide the graduate with educational experience necessary for further training and practice in Medicine. *Upon successful completion of the program, the graduates* should demonstrate comprehensive knowledge, clear understanding and outstanding skills of the core information associated with the profession as follows:

- 1/1 Acquire a core body of basic contemporary scientific knowledge, skills, and attitudes essential for the practice of medicine. (**NARS Attributes 1**)
- 1/2 Focusing on various areas of primary health care ailments. (**NARS Attributes 2**)



1/3 Applying patient safety and infection control measures during practice. (NARS Attributes 2)

1/4 Function independently and effectively on multidisciplinary teams of health care professionals whose members create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives. (NARS Attributes 3)

1/5 Awareness and participation in different social and community aspects of health care. (NARS Attributes 4)

1/6 Acquire appropriate ethical professional skills necessary for dealing with patients, their families, and colleagues. (NARS Attributes 5)

1/7 Communicate effectively with patients, their families and other health care professionals. (NARS Attributes 6)

1/8 Evaluate and manage common diseases and emergencies properly by applying diagnostic, analytical thinking, problem-solving and decision-making skills. (NARS Attributes 7)

1/9 Identify own professional limits and seek appropriate consultation from other health care professionals when indicated. (NARS Attributes 8)

1/10 Engage in life-long learning and an ability to acquire and apply new knowledge as needed. (NARS Attributes 9)

1/11 Apply effectively proper research methodologies, plan and conduct high-quality and multidisciplinary scientific research related to medical practice (NARS Attributes 9)

1/12 Use different information technology techniques in medical field. (Benchmark: NARS 5.5 - 2017, Egypt)

1/13 Manage time and resources effectively and set priorities (Benchmark: NARS 6.6 - 2017, Egypt)



## 2. Intended Learning Outcomes (ILO's)

### A. Knowledge and understanding:

By the end of the program, the graduate should be able to:

- A1) Describe the normal structure and function of the human body at different levels including molecular, cellular and organ system levels and those involved in maintaining body homeostasis. **(NARS A.1)**
- A2) Describe different life stages of the normal growth and development of the human body including clinically relevant age and sex variations. **(NARS A.2)**
- A3) Identify the altered development, growth, structure and function of the human body and its major organ system that are associated with various common diseases. **(NARS A.3)**
- A4) Explain the role of genetics in health and disease and the basic principles of gene therapy as well as genetic counselling. **(NARS A.3)**
- A5) Discuss the etiology, pathogenesis, clinical picture, differential diagnosis, diagnosis, complications, and treatment of common and life-threatening problems affecting patients of different age groups. **(NARS A.4)**
- A6) Identify the indications for appropriate intervention and principles of pre- and post-operative care according to investigations results, history findings and physical examination. **(NARS A.5)**
- A7) Identify the risk factors and different organisms causing common infectious diseases **(NARS A.6)**
- A8) Discuss the principles of epidemiology and the methods and biostatistics used for assessment, prevention, and control of communicable and non-communicable diseases. **(NARS A.6)**
- A9) Identify the principles of appropriate and cost-effective pharmacological and non-pharmacological therapies. **(NARS A.7)**
- A10) Describe the population demography, and the implications of cultural, socioeconomic, psychosocial, health and nutritional status for healthcare. **(NARS A.8)**



A 11) Demonstrate the principles of legal, medical ethics, patient's and human rights governing ethical decision making in clinical practice and the major medical ethical dilemma. **(NARS A.9)**

A12) Identify the principles of history taking and physical examination with consideration to patients' mental status, social and cultural background. **(NARS A.10)**

A 13) Identify medical or health research methodology and basic statistics. **(NARS A.11)**

A14) Illustrate pharmacological principles of treatment, its efficacy in the management and symptomatic relief of diseases, and their interactions and adverse reactions. **(NARS A.12)**

#### Teaching and Learning methods:

- Interactive Lectures
- Small group discussions
- Seminars
- Self-learning

#### Assessment methods:

- Multiple Choice Questions (MCQs)
- Short Answer Questions
- Oral Examinations

#### B. Intellectual Skills:

By the end of the program, the graduate should be able to:

B1) Integrate basic biomedical sciences with clinical conditions and patient's care. **(NARS B.1)**

B2) Integrate the results of history taking, physical examination, and diagnostic procedures into a meaningful diagnostic formulation and a management plan of patient. **(NARS B.1)**

B3) Prioritize and analyse the medical problems and their differential diagnoses using critical thinking and evidence-based medicine. **(NARS B.2)**



B4) Formulate a scheme of pathogenesis, diagnosis, and management plan for common and life-threatening / emergency conditions including traumatic and poisoning cases. **(NARS B.3)**

B5) Select the appropriate and cost-effective diagnostic investigations for diagnosis and solving each common clinical problem. **(NARS B.4)**

B6) Formulate a list of initial diagnostic hypothesis and judge prioritization of the possibilities for each serious medical conditions and common emergencies. **(NARS B.5)**

B7) Appraise the professional limitations and seek advice when needed. **(NARS B.6)**

#### Teaching and learning methods:

- Interactive lectures
- Brainstorming
- Problem-Solving
- Small group discussions
- Seminars
- Self-learning

#### Assessment Methods:

- Problem solving questions
- Case study questions
- Oral Examinations

#### C. Professional and Practical Skills:

By the end of the program, the graduate should be able to:

C1) Demonstrate the normal anatomy of the body and its major organs of systems both grossly and microscopically **(Benchmark NARS 4.1 - 2017, Egypt)**

C2) Perform essential practical skills of basic medical sciences associated with major diseases e.g., preparing and reading histological, pathological, and microbiological slides and biochemical tests. **(Benchmark NARS 4.8 - 2017, Egypt)**

C3) Obtain and document an accurate medical history in the outpatient, inpatient and emergency conditions. **(NARS C.1)**



C4) Perform and record full physical examination and mental assessment appropriate to age and gender in acute and chronic clinical conditions. (NARS C.2)

C5) Formulate a list of differential provisional diagnoses to identify and diagnose the patient problems. (NARS C.3)

C6) Manage common serious and urgent conditions including traumatic and poisoning cases according to expected protocols and evidence-based medicine. (NARS C.4)

C7) Ensure the cost-effectiveness of health care management depending on differential diagnosis and investigation results. (NARS C.5)

C8) Diagnose common medical situations and different health problems appropriately depending on interpretation and integration of investigation results with the clinical data. (NARS C.6)

C9) Construct and implement appropriate management plans and evaluate their effectiveness and outcomes in health promotion and disease prevention. (NARS C.7)

C10) Perform basic life support adequately during managing life-threatening, serious conditions and injuries. (NARS C.8)

C11) Perform health education, counselling, and appropriate preventive services to patient, their families and community. (NARS C.9)

C12) Write safe and rational prescriptions of drugs for patients with common diseases and those in acute emergencies considering age, weight, side effects, drug interaction, and health status. (NARS C.10)

C13) Perform routine technical and therapeutic procedures needed for daily medical practice as essential diagnostic and intervention procedures in a competent and safe way. (NARS C.11)

C14) Record and keep concise and complete medical records according to legal and administrative framework. (NARS C.12)

C15) Apply principles of sterilization and infection control measures to prevent the spread of infection on hospital and community levels. (NARS C.13)

C16) Take informed consent before any procedure or intervention considering discussion of safety aspect with patients and their families. (NARS C.14)



C17) involve the patients and their families in making management decisions and refer the patient at appropriate stages. (NARS C.15)

C18) Provide care for patients in end-of-life situations offering support to their families. (NARS C.16)

C19) Adopt professional behaviour in all aspects of practice, showing honesty, commitment, integrity, and compassion and making the care of the patient the first concern. (NARS C.17)

C20) Adhere to the professional standards and rules of the profession. (NARS C.18)

C21) Respect different cultures, religions, and values making patient care the first concern regardless of their backgrounds. (NARS C.19)

C22) Respect confidentiality and privacy of patients. (NARS C.20)

C23) Respect seniority, consult and refer the patient at appropriate stages. (NARS C.21)

C24) Conduct high-quality, multidisciplinary, and evidence-based practice scientific research related to medical practice to address contemporary professional issues. (NARS C.22)

#### Teaching and learning methods:

- Demonstrations
- Practical lessons (laboratory)
- Clinical training (In the departments of hospitals)
- Clinical case discussion (bed-side teaching)
- Clinics and emergency operation room
- Simulations and roll playing
- Field training and logbook

#### Assessment Methods:

- OSPE (Objective Structure Practical Examinations)
- OSCE (Objective Structure Clinical Examinations)
- Work samples, such as, logbooks and portfolios



#### **D. General Skills:**

By the end of the program, the graduate should be able to:

- D1) Communicate effectively with patients, their families and other health professionals through verbal and written means. **(NARS D.1)**
- D2) Respect the different cultural beliefs and values in the community they serve and ensure the privacy of patients' information. **(NARS D.2)**
- D3) Work effectively independently and within a multidisciplinary team or can lead a team. **(NARS D.3)**
- D4) Respect the role and the contributions of other health care professionals regardless of their degrees or rank. **(NARS D.4)**
- D5) Establish life-long learning needs of the medical profession and continuously seeking to improve. **(NARS D.5)**
- D6) Use health information technology and present information clearly in written, electronic, and oral forms. **(NARS D.6)**
- D7) Use written and electronic records and other health information for the benefit of the patients. **(NARS D.7)**
- D8) Work under pressure and manage time and resources effectively and set priorities. **(NARS D.8)**

#### **Teaching and learning methods:**

- Role model.
- Discussions (Seminars)
- Computer and web-based learning
- Directed self-study

#### **Assessment Methods:**

- Checklist
- Report
- Power Point presentations



### 3. Academic Standards

- The program intended learning outcomes (ILO's) are developed according to the National Academic Reference Standards (NARS) for Undergraduate Medical Education Programs May 2018, First Edition issued by Council for Accreditation and Quality Assurance Yemen, which adopted and approved by faculty council N0. 6 (24/6/2019). See appendix 1: NARS 2018 in Yamen
- The following Alignment Matrices were constructed:
  - Appendix 2: Matrix 1: Program Aims Versus Graduate Attributes of NARS.
  - Appendix 3: Matrix 2: program ILOs versus NARS ILOs
  - Appendix 4: Matrix 3: Program aims versus program intended learning outcomes

### 4. Benchmark:

- NARS 2017 of NAQAAE, Egypt

### 5. Program structure:

- **Duration:** 6 Academic years + 1 year internship
- **Program levels:** 3 Preclinical years and 3 Clinical years
- Total teaching hours in the program:
  - Batch 34: **4898** hours, Theoretical = **2680** hours, Practical = **2218** hours
  - Batch 37: **5040** hours, Theoretical = **2865** hours, Practical = **2175** hours

Courses	Number and % of courses				Number and % of Teaching hours			
	Batch 34 2016/2017		Batch 37 2019/2020		Batch 34 2016/2017		Batch 37 2019/2020	
Basic Sciences	12	29.3%	12	30%	1890	38.6%	<b>2070</b>	<b>41%</b>
Clinical / practical Sciences	22	53.7%	20	50%	2618	53.4%	<b>2670</b>	<b>53%</b>
Social Sciences and Humanities: Languages and culture courses)	<b>7</b>	17%	<b>8</b>	20%	390	8%	<b>300</b>	<b>6%</b>
<b>Total courses / hours</b>	<b>41</b>	<b>100%</b>	<b>40</b>	<b>100%</b>	<b>4898</b>	<b>100%</b>	<b>5040</b>	<b>100%</b>



## Program Phases

### Courses Offered by Division of Medicine at the three Phases: -

Phases	Courses according to bylaw 2016 Batch 34 (2016/2017)	Courses according to bylaw 2016 Amendments Batch 37 (2019/2020)
<b>Phase One: Two Years (Basic Medical Sciences + University requirements):</b>	<ol style="list-style-type: none"><li>1. Anatomy I+II.</li><li>2. Physiology I+II.</li><li>3. Biochemistry I+II.</li><li>4. Histology I+II.</li><li>5. Community Medicine I (not recorded in the student's manuscript in 1<sup>st</sup> and 2<sup>nd</sup> year as its exam is continuous and recorded in 3<sup>rd</sup> year)</li><li>6. English language.</li><li>7. Arabic language 101.</li><li>8. Arabic language 102.</li><li>9. Islamic Culture.</li><li>10. Computer science.</li></ol>	<ol style="list-style-type: none"><li>1. Anatomy I+II.</li><li>2. Physiology I+II.</li><li>3. Biochemistry I+II.</li><li>4. Histology I+II.</li><li>5. Community Medicine I + II</li><li>6. English language.</li><li>7. Arabic language 101.</li><li>8. Arabic language 102.</li><li>9. Islamic Culture.</li><li>10. Computer science.</li><li>11. Medical Ethics (moved from phase three)</li><li>12. Arab Israeli Conflict</li><li>13. National culture (No. 12 and 13 added as national courses)</li></ol>
<b>Phase Two: One Year (Applied Medical Sciences):</b>	<ol style="list-style-type: none"><li>1. Pathology.</li><li>2. Microbiology.</li><li>3. Parasitology.</li><li>4. Pharmacology.</li><li>5. Psychology.</li><li>6. Community Medicine I.</li></ol>	<ol style="list-style-type: none"><li>1. Pathology.</li><li>2. Microbiology.</li><li>3. Parasitology.</li><li>4. Pharmacology.</li><li>5. Psychology.</li><li>6. Community Medicine III.</li></ol>
<b>Phase Three: Three Years (Clinical Sciences):</b>	<ol style="list-style-type: none"><li>1. Internal Medicine I+II+III.</li><li>2. General Surgery I+II+III.</li><li>3. Obstetrics &amp; Gynaecology I+II+III.</li><li>4. Paediatrics I+II+III.</li><li>5. Community Medicine II+III+IV.</li><li>6. Medical Ethics (moved to phase one)</li></ol>	<ol style="list-style-type: none"><li>1. Internal Medicine I+II.</li><li>2. General Surgery I+II.</li><li>3. Obstetrics &amp; Gynaecology I+II.</li><li>4. Paediatrics I+II.</li><li>5. Community Medicine IV.</li><li>6. Forensic Medicine and Toxicology.</li><li>7. Ophthalmology.</li></ol>



	7. Forensic Medicine and Toxicology. 8. Ophthalmology. 9. Psychiatry. 10. Otorhinolaryngology. 11. Dermatology. 12. Radiology. <b>(recorded in student manuscript in 6<sup>th</sup> year)</b> 13. Graduation research	8. Psychiatry. 9. Otorhinolaryngology. 10. Dermatology. 11. Radiology. 12. Graduation research
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**Amendments made starting from batch 41 academic year 2023-2024**

الفرقة	المقرر	النظري	العملي	ملاحظة
أولى	Nursing care	15	30	اضافة بناءً على سوق العمل ومنظمة الصحة العالمية
	Community medicine			تم إعادة تقسيم مادة طب المجتمع الى ثلاثة سنوات (ثانية وثالثة ورابعة)
ثانية	Biochemistry 2	90	30	تم فصل مواضيع الجينات في مقرر
	Human genetics	60	30	منفصل
ثالثة	Community medicine 1	30	-	تم إعادة تقسيم مادة طب المجتمع الى ثلاثة سنوات (ثانية وثالثة ورابعة)
	Community medicine 2	90	-	تم إعادة تقسيم مادة طب المجتمع الى ثلاثة سنوات (ثانية وثالثة ورابعة)
رابعة	Community medicine 3	120	60	تم إعادة تقسيم مادة طب المجتمع الى ثلاثة سنوات (ثانية وثالثة ورابعة)
	Patient safety	30	15	اضافة بناءً على سوق العمل ومنظمة الصحة العالمية
	Clinical methodology	30	30	اضافة بناءً على سوق العمل ومنظمة الصحة العالمية



## Curriculum Structure

### According to bylaw 2016 Batch 34 (2016/2017)

#### Phase I: Basic Medical Sciences:

#### YEAR ONE: (Term 1+2) – 30 Weeks

Course Code & No.	Course Title	Theory	Practical	Total Contact Hours	Credit Hours (Equivalent)
MED. ANT. 101	Anatomy I	120	45	165	5
MED. PHS. 102	Physiology I	120	45	165	5
MED. BIO. 103	Biochemistry I	90	45	135	4
MED. HIS. 104	Histology I	45	45	90	2
MED. COM. 105	Community Medicine I <i>(not recorded in student manuscript in this year as its exam is only continuous)</i>	60	-	60	2
UR. 106	English Language	60	-	60	2
UR. 107	Arabic Language 101	60	-	60	2
UR. 108	Arabic Language 102	60	--	60	2
UR. 109	Islamic Culture	60	--	60	2
<b>Total /Week</b>		<b>675</b>	<b>180</b>	<b>855</b>	<b>26</b>



## YEAR TWO: (Term 1+2) – 30 Weeks

Course Code & No.	Course Title	Theory	Practical	Total Contact Hours	Credit Hours (Equivalent)
MED. ANT. 201	Anatomy II	120	45	165	5
MED. PHS. 202	Physiology II	120	45	165	5
MED. BIO. 203	Biochemistry II	90	45	135	4
MED. HIS. 204	Histology II	45	45	90	2
MED. COM. 205	Community Medicine I  <b>(not recorded in student manuscript this year as its exam is only continuous)</b>	60	-	60	2
MED. COR. 206	Computer Sciences	30	30	60	2
<b>Total /Week</b>		<b>465</b>	<b>210</b>	<b>675</b>	<b>20</b>

### Assessment of Students: (year one and two)

- The student will have a comprehensive examination at the end of the second year for the following subjects (Anatomy I+II, Physiology I+II, Biochemistry I+II, histology I+II) and have continuous assessment during the first year as detailed below.
- Then the final mark will be divided equally between the two divisions of the subject (I and II)
- **The detail of the assessment is as follows:**

#### **1) Anatomy:**

- Continuous periodic assessment: 30% of marks allocated (60 marks) during the first and second year
- Final examination in comprehensive exam of 2<sup>nd</sup> year: 70% of marks allocated (140 marks) as follows:

Type of Exam	Marks
1. Written examination	(50 marks)
2. M.C.Q. examination	(50 marks)
3. Oral examination	(20 marks)
4. Practical spotting examination	(20 marks)



## 2) Physiology, Biochemistry and Histology:

- Continuous periodic assessment: 30% of marks allocated (60 marks) during the first and second year
- Final examination in comprehensive exam of 2<sup>nd</sup> year: 70% of marks allocated (140 marks) as follows:

Type of Exam	Marks
1. Written examination	(60 marks)
2. M.C.Q. examination	(60 marks)
3. Oral examination and Practical examination	(20 marks)

## Phase 2: Applied Medical Sciences:

### YEAR THREE: (Term 1 & 2) 15 + 15 weeks

Course Code & No.	Course Title	Theory	Practical	Total Contact Hours	Credit Hours (Equivalent)
MED. PAT. 301	Pathology	120	90	210	6
MED. MIC. 302	Microbiology	120	90	210	6
MED. PAR. 303	Parasitology	60	90	150	4
MED. PHA. 304	Pharmacology	150	60	210	6
MED. PSY. 305	Psychology: behavioural science	30	--	30	1
MED. COM. 306	Community Medicine I (Added as 5 Hs. in student manuscript, the sum of 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> year)	30	--	30	1
Total		510	330	840	24



### Assessment of Students: (year three)

#### Distribution of Examination Marks

Discipline	Total Marks	Continuous Assessment		Final exam			
		Theory	Practical	Theory	Practical	Oral	Total
Pathology	300	80	--	120	100	--	220
Microbiology	300	80	--	190	30	--	220
Parasitology	200	45	20	105	30	--	135
Pharmacology	300	70	15	150	35	30	215
Community Medicine I	100	30	--	70	--	--	70
Psychology	50	--	--	50	--	--	50

**Note: Community medicine I:** It will be studied during the first 3 years and have a comprehensive exam in the third year and continuous assessment during the first 2 years as mentioned above in the table.

#### Phase III: Clinical Sciences

#### YEAR FOUR: Term I + Term II (35 weeks)

Course Code & No.	Discipline	Theory	clinical	total	Credit Hrs. (Equivalent)
MED. GMD.401	Internal medicine I	121	105	226	5
MED. SUR.402	General Surgery I	105	105	210	5
MED. OBS.403	Obstetrics & Gynaecology I	50	50	100	2
MED. PAE.404	Paediatrics I	50	50	100	2
MED. COM.405	Community medicine II	30	30	60	2
MED. FOM.406	Forensic medicine and toxicology	75	20	95	3
MED. RAD.407	Radiology <b>(not recorded in student manuscript in this year as its exam is in 6<sup>th</sup> year)</b>	35	--	35	1
MED. MET. 408	Medical Ethics	60	-	60	2
<b>Total</b>		<b>526</b>	<b>360</b>	<b>886</b>	<b>22</b>



**Total Contact Hours / week = 35**

**Examinations:**

1. Internal Medicine I: written – clinical
2. General Surgery I: written – clinical
3. Community Medicine II: written - Presentation of Research Projects.
4. Paediatrics I: written – clinical
5. Obstetrics & Gynaecology I: written – clinical
6. Forensic Medicine: written – clinical

**Note:** (internal medicine I, General Surgery I, Obstetrics & Gynaecology I, Paediatric I and Community medicine II) will have a comprehensive exam in the sixth year and about 40-50% of their allocated marks will be added to the marks of final year.

**YEAR FIVE Term I + Term II (36 weeks)**

Course Code & No.	Discipline	Theory	Clinical	total	Credit Hrs. (Equivalent)
<b>MED. GMD.501</b>	Internal medicine II	90	108	198	4
<b>MED. SUR.502</b>	General Surgery II	86	120	206	4
<b>MED. OBS.503</b>	Obstetrics & Gynaecology II	50	50	100	2
<b>MED. PAE.504</b>	Paediatrics II	50	50	100	2
<b>MED. COM.505</b>	Community medicine III	36	--	36	2
<b>MED. ENT.506</b>	Otorhinolaryngology	40	30	70	2
<b>MED. RAD.507</b>	Radiology <i>(not recorded in student manuscript in this year as its exam is in 6<sup>th</sup> year)</i>	16	30	46	1
<b>MED. DER.508</b>	Dermatology	40	30	70	2
<b>MED. OPH.509</b>	Ophthalmology	60	30	90	3
<b>MED. PSY.510</b>	Psychiatry	35	30	65	2
<b>Total</b>		<b>504</b>	<b>478</b>	<b>982</b>	<b>24</b>

**Total contact Hours / week= 36**

**Examinations: Part One MBBS:**



1. Internal Medicine II: written – clinical
2. General Surgery II: written – clinical
3. Community Medicine II: written
4. Paediatrics II: written – clinical
5. Obstetrics & Gynaecology II: written – clinical
6. Ophthalmology: written – clinical
7. Psychiatry: written – clinical
8. Otorhinolaryngology: written – clinical

**Note:** (Internal medicine II, General Surgery II, Obstetrics & Gynaecology II, Paediatric II and Community medicine III) will have a comprehensive exam in the sixth year and about 40-50% of their allocated marks will be added to the marks of final year

### **Year Six: Terms I & II: (30 weeks)**

#### **Clinical Rotation**

Course Code & No.	Discipline	Theory	Clinical and tutorial	total	Credit Hours (Equivalent)
<b>MED. GMD.601</b>	Internal medicine III	--	150	150	3
<b>MED. SUR.602</b>	General Surgery III	--	150	150	3
<b>MED. OBS.603</b>	Obstetrics & Gynaecology III	--	120	120	2
<b>MED. PAE.604</b>	Paediatrics III	--	120	120	2
<b>MED. COM.605</b>	Community Medicine IV	--	120	120	2
<b>Total</b>		--	<b>660</b>	<b>660</b>	<b>12</b>

#### **Examinations: Final Part 2 MBBS:**

1. Internal Medicine: written – clinical – orals.
2. General Surgery: written – clinical – orals.
3. Community Medicine: written – orals – Presentation of graduation Research Projects.
4. Paediatrics: written – clinical – orals.
5. Obstetrics & Gynaecology: written – clinical – orals.
6. Radiology: written – clinical

**N.B.:** The faculty is moving towards introducing OSCE and putting less emphasis on orals.



## Curriculum Structure

### According to bylaw 2016 Amendments Batch 37 (2019/2020)

#### Phase I: Basic Medical Sciences:

#### YEAR ONE: (Term 1+2) – 30 Weeks

Course Code & No.	Name of course	Teaching hours		Total	Allocated marks
		Theory	Practical		
ANT 101	Anatomy I	120	90	210	350
PHS 103	Physiology I	120	60	180	300
BIO 104	Biochemistry I	120	60	180	300
HIS 102	Histology I	60	60	120	200
COM 105	Community Medicine I	60	-	60	100
UR. 106	English Language	60	-	60	100
UR.107	Arabic Language 101	30	-	30	100
UR. 108	Arabic Language 102	30	--	30	100
UR. 109	Islamic Culture	30	--	30	100
MET 406	Medical Ethics	30	--	30	100
	Arab-Israeli Conflict	30	--	30	100
	National culture	30	--	30	100
Total /Week		720	270	990	1950

#### YEAR TWO: (Term 1+2) – 30 Weeks

Course Code & No.	Name of course	Teaching hours		Total	Allocated marks
		Theory	Practical		
ANT 201	Anatomy II	120	90	210	350
PHS 203	Physiology II	120	60	180	300
BIO 204	Biochemistry II	120	60	180	300
HIS 202	Histology II	60	60	120	200
COM 205	Community Medicine II	60	-	60	100
MED. COR. 206	Computer Sciences	30	30	60	100
Total /Week		510	300	810	1350



### **Phase 2: Applied Medical Sciences:**

#### **YEAR THREE: (Term 1 & 2) 15 + 15 weeks**

Course Code & No.	Name of course	Teaching hours		Total	Allocated marks
		Theory	Practical		
PAT 304	<b>Pathology</b>	<b>120</b>	<b>90</b>	<b>210</b>	<b>350</b>
MIC 301	<b>Microbiology and immunology</b>	<b>120</b>	<b>60</b>	<b>180</b>	<b>300</b>
PAR 302	<b>Parasitology</b>	<b>60</b>	<b>60</b>	<b>120</b>	<b>200</b>
PHA 303	<b>Pharmacology</b>	<b>120</b>	<b>60</b>	<b>180</b>	<b>300</b>
BEH 306	<b>Psychology</b>	<b>30</b>	--	<b>30</b>	<b>50</b>
COM. 305	<b>Community Medicine III</b>	<b>30</b>	--	<b>30</b>	<b>100</b>
<b>Total /Week</b>		<b>480</b>	<b>270</b>	<b>750</b>	<b>1300</b>

### **Phase III: Clinical Sciences**

#### **YEAR FOUR: Term I + Term II (35 weeks)**

Course Code & No.	Name of course	Teaching hours		Total	Allocated Marks
		Theoretical	Practical		
COM 401	Community Medicine IV	90	60	150	200
FRM 402	Forensic Medicine and Tox.	60	30	90	150
PSY 403	Psychiatry	30	30	60	100
DER 404	Dermatology	45	45	90	150
OPT 405	Ophthalmology	60	60	120	200
ENT 406	Ear, Nose and Throat	45	45	90	150
<b>Total</b>		<b>330</b>	<b>270</b>	<b>600</b>	<b>950</b>

#### **YEAR FIVE Term I + Term II (36 weeks)**

Course Code & No.	Name of course	Teaching hours		Total	Allocated Marks
		Theoretical	Practical		
PED 501	Paediatrics I	90	90	180	300
MED 502	Medicine I	120	150	270	450
SUR 503	Surgery I	120	150	270	450
GYN 504	Obstetrics & Gynaecology I	60	90	150	250
RAD 505	Radiology	45	45	90	150
<b>Total</b>		<b>435</b>	<b>525</b>	<b>960</b>	<b>1600</b>



## Year Six: Terms I & II: (30 weeks)

Course Code & No.	Name of course	Teaching hours		Total	Allocated Marks
		Theoretical	Practical		
PED 601	Paediatrics II	90	90	180	300
MED 602	Medicine II	120	150	270	450
SUR 603	Surgery II	120	150	270	450
GYN 604	Obstetrics and Gynaecology II	60	90	150	250
	Graduation research	0	60	60	100
	<b>Total</b>	390	540	<b>930</b>	1550

### **6. Courses contents and specifications:**

- see **appendix 5 and 6**
  - **Appendix 5: matrix of courses versus program ILOs**
  - **Appendix 6: courses specifications**

### **7. Program Admission Requirements:**

- Candidates are required to:
  - Hold a High School degree with an accumulative result of 85%, which contribute to 30% of the admission requirements
  - Sit for an entry examination in the Faculty of Medicine and Health Sciences, which contribute to 70% of the admission requirements.

### **8. Regulation for progression and program completion**

- a) The student may be transferred to the higher level if he fails in three or less courses in any year (such that the total failed courses in all years does not exceed three courses) and is allowed to sit the exam in any failed course in the next year. If at any year the total number of failed courses exceeds three, the student is not



transferred to the higher level until he passes the failed courses so that he has no more than 3 failed courses at any time.

- b) In any case, students are only transferred to the higher level by the end of the academic year
- c) A reset exam is held for the Sixth-year student if he has three or less failed courses
- d) The student must pass all courses to start pre-registration house officer year
- e) The student is graduated after completion of satisfactory training during house officer year.

## 9. Teaching and learning methods:

### Matrix of Teaching and learning methods vs. Programme ILO's

No.	Teaching and learning methods	Program ILO's			
		Knowledge and understanding	Intellectual skills	Practical and professional skills	General skills
1	Interactive Lectures	✓	✓		✓
2	Brainstorming	✓	✓		✓
3	Clinical training: - (In the departments of hospitals) - Clinics and emergency operation room			✓	✓
4	Clinical case discussion (bed-side teaching)			✓	✓
5	Demonstrations			✓	✓
6	Directed self-learning	✓	✓	✓	✓
7	Small group discussions	✓	✓		✓



8	Field training and logbook			✓	✓
9	Computer and web-based learning	✓	✓		✓
10	Practical lessons (laboratory)			✓	✓
11	Problem-Solving	✓	✓	✓	✓
12	Role model			✓	✓
13	Seminars	✓	✓		✓
14	Simulations and role playing			✓	✓
15	Synchronous and asynchronous learning	✓	✓		
16	Project – based learning	✓	✓	✓	✓

## 10. Assessment Methods for students of the program

### Time of exam and distribution of marks:

Time of Exam	Weight of Marks
Continuous Assessment	30% of the total marks
Practical and clinical Exam (OSPE/ OSCE)	30% of the total marks
Final Exam	40% of the total exam
The Pass Limit	35% of the written exam and practical of each course and 65% of the total marks
Bachelor's degree Exam	Accounts for 50% of the total marks in the major subjects



### Matrix of Assessment methods vs. Programme ILO's

Method	What to measure of ILOs
Written Exam: MCQ and Short and Long Essay	Knowledge and understanding and Intellectual skills
OSPE and OSCE	Practical and professional skills, Knowledge and understanding, Intellectual skills and General skills
Oral Exam Viva Oral Cards	Knowledge and understanding, Intellectual skills and General skills
Continuous Assessment	Knowledge and understanding, Intellectual skills and General skills

### Matrix of Assessment methods vs. Programme ILO's

No.	Assessment methods	Programme ILO's			
		Knowledge and understanding	Intellectual skills	Practical and professional skills	General skills
1	Multiple Choice Questions (MCQs)	✓	✓		
2	Short Answer Questions	✓	✓		
3	Oral Examinations	✓	✓		✓
4	Problem solving questions	✓	✓	✓	✓
5	Case study questions	✓	✓	✓	✓
6	OSPE (Objective Structure Practical Examinations)	✓	✓	✓	✓
7	OSCE (Objective Structure Clinical Examinations)	✓	✓	✓	✓
8	Work samples: logbooks and portfolios	✓	✓	✓	✓
9	Checklist				✓
10	Report				✓
11	Power Point presentations				✓



## Teaching, learning and Assessment methods vs. Programme ILO's

ILOs	Teaching and Learning methods	Assessment methods
<b>Knowledge and understanding</b>	<ul style="list-style-type: none"><li>Interactive Lectures</li><li>Small group discussions</li><li>Seminars</li><li>Self-learning</li></ul>	<ul style="list-style-type: none"><li>Multiple Choice Questions (MCQs)</li><li>Short Answer Questions</li><li>Oral Examinations</li></ul>
<b>Intellectual Skills</b>	<ul style="list-style-type: none"><li>Interactive lectures</li><li>Brainstorming</li><li>Problem-Solving</li><li>Small group discussions</li><li>Seminars</li><li>Self-learning</li></ul>	<ul style="list-style-type: none"><li>Problem solving questions</li><li>Case study questions</li><li>Oral Examinations</li></ul>
<b>Professional and Practical Skills</b>	<ul style="list-style-type: none"><li>Demonstrations</li><li>Practical lessons (laboratory)</li><li>Clinical training (In the departments of hospitals)</li><li>Clinical case discussion (bed-side teaching)</li><li>Clinics and emergency operation room</li><li>Simulations and roll playing</li><li>Field training and logbook</li></ul>	<ul style="list-style-type: none"><li>OSPE (Objective Structure Practical Examinations)</li><li>OSCE (Objective Structure Clinical Examinations)</li><li>Work samples, such as, logbooks and portfolios</li></ul>
<b>General Skills</b>	<ul style="list-style-type: none"><li>Role model.</li><li>Discussions (Seminars)</li><li>Computer and web-based learning</li><li>Directed self-study</li></ul>	<ul style="list-style-type: none"><li>Checklist</li><li>Report</li><li>Power Point presentations</li></ul>

## 11. Methods of evaluation of the program

Evaluator	Method	Sample
Final-year student	Survey	Not less than 15%
Graduates	Survey	Not less than 15%
Stakeholders	Survey, meetings	Represent different related sectors
External evaluator	Report	One
Internal evaluator	Report	One

**Name of Program coordinator: Prof. Dr. Nora Kasem**

**Signature: Nora Kasem**

**Date: 29 June 2024**



## Appendices

- **Appendix (1):** NARS of medical Program 2018 of Yamen
- **Appendix (2):** Matrix of Program Aims vs. NARS Attributes
- **Appendix (3):** Matrix of Program ILOs vs. NARS ILOs
- **Appendix (4):** Matrix of Program Aims vs. Program ILOs
- **Appendix (5):** Matrix of Program ILOs vs. Courses
- **Appendix (6):** Courses Specifications **Separate**



## Appendix (1): NARS for medical Programme 2018 Yamen

### I. GRADUATE ATTRIBUTES

*Upon successful completion of an undergraduate medical education program, the graduates will be able to:*

1. Demonstrate sound knowledge, skills, and attitudes required for patients' care.
2. Provide health care services at different levels, applying patient safety and infection control measures during practice
3. Work independently and/or in a team and collaborate effectively with other health care professionals
4. Recognize economic, social, psychological, environmental, and cultural factors that interfere with health.
5. Behave ethically and professionally when dealing with patients, their families and other health care professionals
6. Communicate effectively with patients, their families and other health care professionals
7. Apply diagnostic, critical thinking, and problem-solving skills necessary for proper evaluation and management of common medical conditions and emergencies.
8. Recognize own professional limits and seek appropriate consultation from other health care professionals when indicated.
9. Establish the foundations of lifelong learning and research, with commitment to continuous self-improvement

### II. LEARNING OUTCOMES

#### A. KNOWLEDGE AND UNDERSTANDING

*Upon successful completion of an undergraduate medical education program, the graduates will be able to:*

- A.1 Describe the normal structure of the human body at molecular, cellular and biochemical, in order to maintain body homeostasis.



- A. 2 Recognize the normal human growth and development in all stages of human development.
- A. 3 Recognize any alteration or abnormality in the function and structure of the human body.
- A.4 Identify the etiology, pathogenesis, clinical manifestation, diagnosis differential diagnosis and complication of different communicable and non-communicable disease at the different stages of human's life.
- A.5 Conduct different investigations and interpret the results with the Integration of the history findings and physical examination.
- A. 6 Recognize the principles of epidemiology, prevention and control of communicable and non-communicable diseases.
- A.7 Efficiently use the principles of appropriate and cost-effective pharmacological and non-pharmacological therapies.
- A. 8 Recognize the psychological, social, and cultural aspects of healthcare.
- A. 9 Demonstrate knowledge and understanding of legal, medical ethics and patient's and human rights related to medical practices.
- A. 10 Apply the principles of history taking and physical examination with consideration to patients' mental status, social and cultural background.
- A. 11 Demonstrate an understanding of medical or health research and basic statistics.
- A. 12 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.

#### **B. COGNITIVE/INTELLECTUAL SKILLS**

*Upon successful completion of an undergraduate medical education program, the graduates will be able to:*

- B.1 Analyse data obtained from medical history, physical examination and Para clinical investigations to reach a final diagnosis and plan the management of patients.
- B. 2 Implement critical thinking and evidence-based medicine in problem solving in the diagnosis and patients' management.



- B.3 Design appropriate management plans for common medical conditions and emergencies.
- B.4 Select appropriate investigations, analyze, and solve problems with minimal guidance.
- B.5 Appraise and prioritize serious medical conditions and common emergencies.
- B. 6 Recognize professional limitations and seek advice when needed.

**C. PRACTICAL AND PROFESSIONAL SKILLS:**

*Upon successful completion of an undergraduate medical education program, the graduates will be able to:*

- C 1. Perform patient centered history taking, physical examination and investigations in all conditions.
- C 2. Perform and record thorough mental and physical examination according to different ages and sexes.
- C 3. Identify the patient problems and formulate a list of differential provisional diagnoses.
- C 4. Identify serious and urgent conditions and tailor management according to expected course.
- C 5. Choose the appropriate investigations relevant to differential diagnoses taking in consideration the availability and cost-effectiveness.
- C 6. Interpret the investigation results and integrate them with the clinical data to reach the appropriate diagnosis.
- C 7. Construct appropriate management plans and evaluate their effectiveness and outcomes.
- C 8. Manage life threatening conditions emergency care and basic life support.
- C 9. Provide Health education, counseling and appropriate preventive services.
- C 10. Prescribe and safely administer appropriate drugs taking in consideration side effects and interactions, including multiple treatments, long-term conditions.
- C 11. Perform diagnostic and interventional procedures in a competent and safe way (Annex 1 and 2)



- C 12. Record and keep concise and complete medical records according to legal and administrative framework.
- C 13. Apply control measures to prevent the spread of infection.
- C 14. Discuss safety aspects with the patients and their families before any procedure or intervention and take informed consent.
- C 15. Involve the patients and their families in making management decisions.
- C 16. Provide care for patients in end-of-life situations offering support to their families
- C 17. Adopt professional behaviour in all aspects of practice, showing honesty, commitment, integrity, and compassion and making the care of the patient the first concern.
- C 18. Adhere to the professional standards and rules of the profession.
- C 19. Demonstrate respect to different cultures, religions and values and manage all patients equally regardless of their backgrounds.
- C 20. Respect confidentiality and privacy of the patients.
- C 21. Respect seniority, consult and refer the patient at appropriate stages.
- C 22. Apply research, and statistical methods for identification, analyzing and resolution of health problems for further planning.

**D. GENERAL / TRANSFERABLE SKILLS**

*Upon successful completion of an undergraduate medical education program, the graduates will be able to:*

- D 1. Communicate clearly and effectively with patients, their families, health care professionals and the community through verbal, written or digital methods.
- D 2. Respect the different cultural beliefs and values in the community they serve and ensure the privacy of patients' information.
- D 3. Work efficiently within a multidisciplinary team and demonstrate ability to build positive working relationships.
- D 4. Recognize and respect the contributions of other health care professions.
- D 5. Develop a lifelong interest to continue learning, improve skills, acquire, and apply up-to-date knowledge and new skills.



D 6. Utilize health information technology and present information clearly in written, electronic and oral forms.

D 7. Use written and electronic records and other health information for the benefit of the patients.

D 8. Manage time and resources, set priorities and deal with stress in all situations.

#### **Annex .1 (Essential diagnostic and intervention procedures)**

1. Basic infection control measures
2. Venipuncture and collection of blood samples
3. Cannulation of veins
4. Administer intravenous therapy and use infusion devices
5. Administer intramuscular, subcutaneous and intradermal injections
  - Using nebulizers and other inhalation devices
  - Administer oxygen with different devices
  - Insert nasogastric tubes
  - Bladder catheterization (Male and female)
  - Perform and interpret Electrocardiograms (ECG)
  - Manage ECG monitor
  - Thoracocentesis
  - Paracentesis
  - Cardiopulmonary resuscitation and basic life support (BLS)
  - Safe blood transfusion
  - Basic bedside laboratory tests (annex 2)
  - Administer local anesthetics
  - Surgical suturing and wound care
  - Manage normal labor
  - Obtain common swaps for diagnostic purposes
  - Skin and subcutaneous abscess incision and drainage
  - Surgical scrub
  - Write safe and concise prescriptions and medical orders



## Annex 2. (Basic practical skills)

1. Bedside measuring of blood glucose
2. Perform urine analysis using dip-sticks
3. Prepare simple blood tests such as complete blood count, blood groups, bleeding time, clotting time and erythrocyte sedimentation rate.
4. Prepare samples for routine urine and stool examination and identify common abnormalities.
5. Perform tuberculin test
6. Perform common bacterial cultures
7. Perform pulse oximetry and bedside respiratory function tests



## Appendix (2): Matrix of Program Aims vs. NARS Attributes

NARS of Yemen	Medical Program Aims												
Graduate Attributes	1/1	1/2	1/3	1/4	1/5	1/6	1/7	1/8	1/9	1/10	1/11	1/12	1/13
1	✓												
2		✓	✓										
3				✓									
4					✓								
5						✓							
6							✓						
7								✓					
8									✓				
9										✓	✓		
Bench mark												BM	
Bench mark													BM

Note: All program aims, and its learning outcomes achieve Yemeni Academic Standards and are consistent with Egyptian Academic Standards



## Appendix (3): Matrix of Program ILOs vs. NARS ILOs





## Appendix (4): Matrix of Program Aims vs. Program ILOs



## Appendix (5): Matrix of Program ILOs vs. Courses



