21 SEP University

Republic of Yemen

21 September University of Medicals & Applied Sciences

Faculty of Medicine

Bachelor of Medicine and Surgery (MBBS)

Program Specification

16 NOV 2024

Preparation Committee:

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Program Specification

1. Program Identification and General Information:		
1	**Scientific name of the program:**	Medicine and Surgery (MBBS)
2	**Total credit hours required to award the degree**	**250** without the internship
3	**Number of years needed for completion of the program:**	(6+1) 6 Years & one-year internship
4	**The body responsible for granting the degree:**	21 September University for Medical and Applied Sciences
5	**The body responsible for the program:**	Faculty of Medicine
6	**Award granted on completion of the program:**	Bachelor of Medicine and Surgery (MBBS)
7	**Study system:**	Block System
8	**Study Language of the Program:**	English Language
9	**Entry requirements:**	Secondary School (Scientific Section) & Acceptance Exam
10	**Departments participating in the program:**	All Medicine Faculty Departments (Annex 6)
11	**Starting year of the program:**	2016/2017
12	**Study methods in the program:**	Full time
13	**Location of Delivery:**	University campus
14	**The program resources:**	Student fees
15	**Minimum grade requirements:**	As per regulations of the Ministry of Education and Scientific Research
16	**Other admission requirements:**	According to the university rules and regulations.
17	**Date of current development of the program:**	2023
18	**Prepared by :**	1- Prof. Mujahed Measar 2- Assoc. Prof. Sadik Abdul-Mougbil 3- Assoc. Prof. Salwa Al-Khomiri 4- Assoc. Prof. Walied Al-Thahibi 5- Prof. Noman Fairooz

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19	**Program coordinator:**	1. Assoc. Prof. Salwa Al-Khomiri 2. Assoc. Prof. .Mohammed Al-Eriani

2. Introduction:-

The medicine and surgery program in the Faculty of Medicine at 21Septembr University has adopted the block system as a teaching system through which it will achieve its goal of graduating medical cadres with academic qualifications and high skills to help society and alleviate its suffering.

The medicine and surgery program offered for six academic years and one-year internship (6+1). The studying period are divided into two phases:

- The first phase incorporation of the basic and applied sciences (preclinical phase), which extends over a period of three years in which medical courses are taught in an interdisciplinary manner (organ system based) in order to enhance and comprehend the student's knowledge.
- The second stage is the clinical science stage, which lasts over three years, during which the student's clinical skills are built.

Promising Jobs:

The graduated doctor will able to work in different filed as:

1- Public and private hospitals
2- Private clinics
3- Academic fields
4- Health organizations

3. University Vision, Mission, Values, Objectives, and Goals:

3.1-University vision:

A contemporary University with National Responsibility and a Faith Identity.

3.2-University mission:

Leading the transformation in the management and delivery of health care with all partners by setting a standard of excellence in education and medical and applied research in a way that meets the needs of Yemeni society, its specificity and regional influence.

3.3-University Core values:

1- Leadership and influence
2- Excellence &Creativity

3- Teamwork

3.5-Strategic goals:

1. Ensuring the application of quality standards and setting standards of excellence in medical and applied sciences, scientific research and community service.
2. The centrality of the student in the educational process, the partnership with them for life, the consolidation of the principles of national responsibility and faith identity, their care and the development of their capabilities after graduation and during work.
3. Attracting, employing and retaining scholars, cadres and highly specialized talents to gain minds and reverse the trend of "brain drain" in a way that promotes and ensures the creation of thinkers, businessmen and good citizens.
4. Continuous development of the distinguished academic infrastructure and the establishment of modern research and service centers with high efficiency and capable of making a real impact locally and regionally.
5. Enhancing the university's position as a preferred partner for local, regional and international partnership through implementing innovative models of education, exchanging research and knowledge, and providing real and effective outcomes for developing professional practices to benefit from them locally and regionally.

4. Faculty Vision, Mission, Values, and Objectives:

4.1-Vision:

A distinguished Medicine Faculty capable of competing locally and regionally.

4.2-Mission:

The Faculty of Medicine be contemporary in providing a distinguished educational level based on creativity and innovation and a true partner in facing the main national health challenges and in treating patients with high quality based on research to solve problems that leads to integrated health care in an ethical context.

4.3-Values:

1. Professional
2. Continuous Education.
3. Appreciation of Science and Scientists.
4. Transparency and Accountability.
5. Team Work.

4.4-Faculty Objectives (Strategic):

1. Finding effective solutions for the university hospital, the infrastructure of the College and its annual budget.

2. Bridging the gap in the human resources adequately and efficiently, and developing them on a professional basis.
3. Improving the quality of the human medicine program to be met with the quality standards, national and international academic accreditation.
4. Strengthening the governance and management systems, consolidating the decentralization, and practicing the transparency and accountability.
5. Building up the students' abilities to think, analyze and solve the problems according to the research methods that qualify them for the labor market and achieve their practical and professional aspirations in future.
6. Contributing in supporting the science-oriented research on the basis of planning related to the goals of comprehensive development in Yemen.
7. Forming real and effective partnership with the society, its institutions and the counterpart faculties at national, Arab and international level.

5. Medicine and Surgery Program Mission and Objectives:

5.1- Program Mission:

Providing the community with distinguished doctors with human values and who play an educational, training, research and health role that qualifies them for professional competence at the highest levels, and who are capable of continuous self-learning, providing quality health care and sustainable research follow-up that supports engagement and interaction with the local and global medical community.

5.2-Program Objectives: -

This program aims to:

1.Graduating competent doctors who possess the basic medical knowledge and skills to practice medicine with efficiency and serve the community.

2. Improve the practical and clinical skills with advanced scientific methods

3.Develop the students diagnostic and therapeutic skills in solving various health problems.

4. Develop students' critical thinking in clinical that influences the creativity and the ability to deal with versatile medical aspects.

5.Prepare graduates to become able Integrate into a team work with sincerity and integrity

6.Prepare the students with abilities and skills that qualify them to join higher studies and training programs that allow them to specialize, improve performance and professional development.

7.Enhancing the principles of professional, ethical and national responsibility among students.

8. Providing students with self-learning skills and using information technology, medical evidence and scientific research to keep pace with the latest developments in the field.

6. Program Standards & Benchmarks:

6.1- Program Standards: -

A. Academic Standards:

1- National Accreditation Standards for Faculties of Medicine in Yemen (Version 2022).

2- National Academic Reference Standards (NARS) for Undergraduate Medical Education Programs (Version 2022).

3- World Federation for Medical Education (WFME). Basic Medical Education: WFME Global Standards for Quality Improvement (2020 Revision).

4- Yemeni Universities Law No. (17) of 1995.

5- Prime Minister's Decision No. (284) of 2008 regarding the Unified System for Student Affairs in Yemeni Universities (public universities).

6- 21 September university for medical and applied sciences rules and regulations.

7- Faculty of Medicine Academic and Student Affairs Regulations.

Annex- 2, Academic Standards Curriculum Criteria of Accreditation Board

Annex- 3, Unified Regulations for Student Affairs, Ministry of Education and Scientific Research

6.2- Program Benchmarks:

1. University of Science and Technology (YUST)-Yemen https:/www.ust.edu.ye/
2. Taiz university -Yemen http:// www.taiz.edu.ye/
3. Hadramout University -Yemen https:// www.hu.edu.ye
4. Jordan University of Science and Technology (JUST)-Jordan www.just.edu.jo
5. Mohammed Bin Rashid University of Medicine and Health Sciences https://www.mbru.ac.ae/
6. Tahran University-Iran https://en.tums.ac.ir/en
7. Dublin University-Ireland-UK https://www.ucd.ie

7. Graduate Attributes:

Upon successful completion of an undergraduate Medicine and Surgery (MBBS) Program, graduates will be able to:

1. Healthcare provider: providing patient-centered high-quality care efficiently, effectively and safely within their defined scope and limits of their expertise and within the context of healthcare system.
2. Professional: Adhering to ethical, professional, and legal standards, demonstrating a commitment to the patients, profession and society, and to their wellbeing and lifelong personal and professional development.
3. Scholar: Using the medical knowledge and health research to meet the needs of patients, healthcare system, and society.
4. Health Advocate: contributing to prevent illness and promote the health and well-being of their patients, and society.
5. Communicator & Collaborator: Communicating effectively with patients and their families, healthcare team and the society, and collaborating inter professionally, working as both a team member and a leader.

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8. Program Intended Learning Outcomes (PILOs):

A. KNOWLEDGE AND UNDERSTANDING

Upon successful completion of an undergraduate Medicine and Surgery (MBBS) Program, the graduates will be able to:

A1. Describe the general and basic sciences related to human body structure and functions with emphasis on normal and abnormal conditions.

A2. Identify the progress of human body through all stages of development, alteration of structure and function during these stages and indication for surgical or non-surgical intervention and the role of treatment in healing or curing the diseases.

A3. Explain the pathological and pathogenesis changes in various diseases, and their etiological triggers including genetic, developmental, infectious, metabolic, endocrinal, autoimmune, neoplastic, traumatic, degenerative and occupational factors.

A4. Recognize the local and international guidelines, ethics, disease management, prevention and other risk factors that affect community health.

B. COGNITIVE/INTELLECTUAL SKILLS

Upon successful completion of an undergraduate Medicine and Surgery (MBBS) Program, the graduates will be able to:

B1. Compare between normal and abnormal conditions and predict the appropriate treatment or intervention.

B2. Analyze and interpret the finding from history, clinical examination and investigations to propose a diagnosis and develop a shared management plan for common acute, chronic and urgent physical and mental health presentations.

B3. Explore to medical practice the principles, method and knowledge of population health and the improvement of health and healthcare.

C. PRACTICAL AND PROFESSIONAL SKILLS:

Upon successful completion of an undergraduate Medicine and Surgery (MBBS) Program, the graduates will be able to:

C1. Perform complete clinical examination and precise investigations to reach the final diagnosis

C2. Prescribe appropriate drugs taking in mind the benefits, side effects, interactions, safety and availability.

C3. Carry out routine medical procedure and demonstrate the ability of using common medical tools required for diagnosis and management with highly qualified competency.

8.Program Intended Learning Outcomes (PILOs):

D. GENERAL / TRANSFERABLE SKILLS

Upon successful completion of an undergraduate Medicine and Surgery (MBBS) Program, the graduates will be able to:

D1. Communicate with professionals, patients, their families and the community through verbal, written and other non-verbal means.

D2. Work individually or in a team and develop lifelong learning using up to date technology that help in understanding the diseases and its control and prevention.

D3. Respect the different cultural beliefs, ethics, personalities, privacy and values for patients and community with a good behavior and follow the institutional and national roles of medical practice

Annex- 5, Survey on Mission and Objectives of the Program and Similar Accredited Programs and its Alignment to the University, Faculty, and Department Missions and
Annex-7, Alignment of Program Intended Learning Outcomes (PILOS) to Program Objectives (POs)
Annex- 8, Mapping of Program Objectives to the Faculty Mission
Annex- 9, Survey of PILOs for Similar Accredited Programs at National and International universities

9. Teaching and Learning Strategies:

- Interactive lectures
- Seminars
- Practical session
- Training
- Discussion
- Self-learning and Electronic learning
- Presentation
- Office hours
- Case study (CBL)
- Problem Based Learning (PBL)

Teaching Strategy	Description
Interactive lectures	These are interactive lectures weekly conducted in the class and supported with variety of teaching formats including, lectures and multimedia presentations, use of whiteboard to solve examples and illustrating different tasks and problems introduced by the presentation, and class discussions, in which concepts, approaches, and case studies are presented, explored, and shown students what they need to know.
Seminars	Discussion of specific topic by group of students under the observation of the lecturer.

Teaching Strategy	Description
Practical session	In highly equipped labs the student will trained by practicing certain topic.
Training	This training preformed in the hospital by such teaching strategy the students improve their clinical skills.
Discussion	It is interactive measure by which the lecturer explores the level of understanding the subject among students
Self-learning	Improving the knowledge by the student oneself without assistants also used Electronic learning
Office hours	By which the lecturer discusses and answer for students' questions.
Presentation	An activity by which the student describes, explain something Infront of group of students.
Case studies (CBL)	Study the clinical cases in depth, training the details of history taking, examination, analysis the gathering data and obtaining diagnosis.
Problem Based Learning (PBL)	A detailed analysis is made of some specific, usually compelling event or series of related events so that learners will better understand its nature and what might be done about it.

10. Assessment Methods:

- Written exam (mid and final terms and quizzes),
- Final practical exam
- OSCE &OSPE
- Final oral exam
- Research
- Homework
- Team work

Assessment Strategy	Description
Written exam **(mid and final terms and quizzes)**	Mid-term test is conducted in the 8th week and final exam is conducted at the end of each course. Both tests are closed book, closed notes. quizzes are related to past as well as topics discussed in the period. This helps students develop self-confidence, readiness, and accuracy in major exams.
Final practical exam	Final practical exam is carried on the end of each course in order to examine the student's practical skills.

Assessment Strategy	Description
OSCE & OSPE	OSCE/OSPE stands for "Objective Structured Clinical Examination." OSCEs/OSPEs are very helpful in medical education because they allow a student to practice and demonstrate clinical skills in a standardized medical scenario.
Final oral exam	It's part of the final assessment of the student knowledge by which the examiner gives the question in spoken form.
Research project	At the end of study years, the students have to work in research project in order to achieve bachelor degree.
Homework	Individual assessment
Teamwork	Group assessment

11. Alignment of Program Intended Learning Outcomes (PILOs) to Teaching Strategies and Assessment Methods:

PILOs	Teaching Strategy	Assessment Methods
Knowledge and Understanding A1, A2, A3, A4	- Interactive lectures, - Seminars - Discussion - Case Study (CBL) - Office Hours - Self learning	-Quizzes - Written Exam -Final Oral Exam -Final Clinical Exam
Intellectual Skills B1, B2, B3	-Interactive lectures, - Seminars - Discussion - Case Study (CBL) - Self Learning - PBL	-Written Exam -Final Oral Exam -Final Clinical Exam -Final Practical Exam
Professional & practical skills C1, C2, C3	-Practical session . -Training -Case Study (CBL) - PBL	-Final Clinical Exam - Final Practical Exam - OSCE -OSPE

PILOs	Teaching Strategy	Assessment Methods
General & Transferable Skills **D1, D2, D3**	- Seminars - Discussion - Case Study (CBL) - Self Learning - Presentation - PBL	- Homework - Teamwork - Research - Oral Discussion

12. Project Assessment:

Each project will be assessed as follows:

Item	Marks Distribution
Research Project	70
Discussion	30
Total	**100**

13.Training Course Assessment:

The training course will be assessed through:

- Log Book
- Case discussion
- Final clinical Exam
- OSCE
- Internship

14.Intended Learning Outcomes Mapping:

See below Annexes.

Annex- 10, Alignment of Program PILOs with Council of Accreditation and NARS Standards

15.Program Structure:

No	Requirements		No. of Courses	Credit Hours	Rational Weight %
1	University Requirements	Compulsory	8	17	6.8%
		Elective	-	-	
2	Basic Requirements	Compulsory	-	-	
		Elective	-	-	
3	Faculty Requirements	Compulsory	4	9	4.4%
		Elective	-	-	
4	Department Requirements	Compulsory			
		Elective			
5	Program Requirements	Compulsory	27	123	48.4%
		Elective	-	-	
6	Field Training	Compulsory	17	97	38.8%
		Elective	-	-	
[7	Project Courses	Compulsory	1	4	1.6%
		Elective	-	-	
	Total:		57	250	100%

15.1. University Requirements

Compulsory Courses (8 course/ 17 Hrs)

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	P	T	Prerequisites, Co-requisites
1.	1	A21U10	Islamic culture	ثقافة اسلامية	2	2	0	0	-
2.	1	A21U11	National culture	ثقافة وطنية	2	2	0	0	-
3.	1	A21U12	English Language 1	لغة انجليزية 1	2	2	0	0	-
4.	1	A21U13	Arabic Language 1	لغة عربية 1	2	2	0	0	-
5.	1	A21U14	Computer Skills	مهارات الحاسوب	3	2	2	0	-
6.	1	A21U15	Arabic Language 2	لغة عربية (2)	2	2	0	0	Arabic Language 101
7.	1	A21U16	English Language 2	لغة انجليزية (2)	2	2	0	0	English Language 102
8.	1	A21U17	Arab and Israeli conflict	الصراع العربي الإسرائيلي	2	2	0	0	
			Total		17	16	2	0	

15.2. Faculty Requirements

Compulsory Courses (4 courses/ 9 Hrs.)

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	P	T	Prerequisites, Co-requisites
1	1	A21F10	Medical Terminology	مصطلحات طبية	2	2	0	0	English Language 1&2
2	1	A21F11	Medical Ethics	اخلاقيات الطب	2	2	0	0	-
3	1	A21F12	Communication Skills	مهارات التواصل	2	2	0	0	-
4	1	A21F13	Fundamental of Nursing	اساسيات التمريض	3	2	2	0	-
Total					**9**	**8**	**2**	**0**	

15.3. Program Major

Compulsory Courses (Blocks+Courses / 123 Hrs)

No.	Level-Sem.	Courspe Code	Block/Course Name	اسم المقرر	Cr. Hrs.	L	P	T	Prerequisites, Co-requisites
1	1	A21P19	Community Medicine	طب مجتمع	3	3	0	0	-
2	1	A21P114	Introduction to Anatomy & Embryology	مقدمة في علم التشريح والاجنة	5	4	2	0	Introduction to Cell Biology and Histology
3	1	A21P115	Introduction to Physiology	مقدمة في علم وظائف الاعضاء	3	3	0	0	-
4	1	A21P116	Introduction to Pathology	مقدمة في علم الأمراض	3	2	2	0	Introduction to Physiology, Introduction to Anatomy & Embryology
5	1	A21P117	Biochemistry 1	كيمياء الحيوية 1	3	2	2	0	-
6	1	A21P118	Introduction to Cell Biology and Histology	مقدمة في علم الخلية والانسجة	3	2	2	0	-
7	1	A21P119	Introduction to Microbiology	الاحياء الطبية الدقيقة	3	2	2	0	-
8	1	A21P120	Introduction to Pharmacology	مقدمة في علم الأدوية	3	2	2	0	Physiology and Biochemistry
9	1	A21P121	Medical Parasitology	علم الطفيليات الطبية	3	2	2	0	Introduction to Microbiology
10	1	A21P122	Immunology	مناعة	3	2	2	0	Physiology Molecular Biology & Genetics
11	2	A21P30	Molecular Biology & Genetics	علم الاحياء الجزيئية والوراثة	2	2	0	0	NONE

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No.	Level-Sem.	Course Code	Block/Course Name	اسم المقرر	Cr. Hrs.	L	P	T	Prerequisites, Co-requisites
12	2	A21P20	Biochemistry 2	2 كيمياء الحيوية	3	2	2	0	Biochemistry 1
13	2	A21P21	Musculo-skeletal System	الجهاز الهيكلي العضلي	8	6	4	0	Physiology, Biochemistry, Anatomy Cell biology Histology, Pathology and Pharmacology
14	2	A21P22	Gastro-intestinal system	الجهاز الهضمي	13	10	6	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology
15	2	A21P23	Respiratory System	الجهاز التنفسي	8	6	4	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology.
16	2	A21P24	Cardiovascular System	الجهاز الدوري القلبي	8	6	4	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology
17	2	A21P25	Nutrition	التغذية	3	2	2	0	Introduction to Biochemistry
18	2	A21P26	Medical Biostatistics	الاحصاء الطبي	2	2	0	0	Community Medicine
19	3	A21P31	Health Management	إدارة صحية	2	2	0	0	Community Medicine, Medical Biostatistics
20	3	A21P32	Genito-Urinary System	الجهاز البولي والتناسلي	8	6	4	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology
21	3	A21P33	Research Methodology	مناهج البحث العلمي	2	2	0	0	Community Medicine, Medical Biostatistics, Health Management
22	3	A21P34	Behavior Science	علوم سلوكية	2	2	0	0	-
23	3	A21P35	Endocrine System	جهاز الغدد الصماء	8	6	4	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology
24	3	A21P36	Central nervous System	الجهاز العصبي المركزي	10	8	4	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology
25	3	A21P37	Haemato-lymphatic System	جهاز الدم واللمف	5	4	2	0	Physiology, Biochemistry, Anatomy Histology,

No.	Level-Sem.	Courspe Code	Block/Course Name	اسم المقرر	Cr. Hrs.	L	P	T	Prerequisites, Co-requisites
									Pathology and Pharmacology.
26	3	A21P50	Public Health & Epidemiology	وبائيات وصحة عامة	4	3	2	0	Community Medicine, Medical Biostatistics, Health Management
27	4	A21P42	Forensic & Clinical Toxicology	الطب الشرعي والسموم	3	2	0	3	All Previous Systems
Total					**123**	**95**	**54**	**3**	

Field Attachments and Training (Blocks+ Courses / 97 hrs)

No.	Level-Sem.	Block Code	Block / Course Name	اسم البلوك/ المقرر	Cr. Hrs.	L	P	T	Prerequisites, Co-requisites
1	4	A21P40	Obstetrics & Gynecology I	نساء وتوليد I	8	4	0	12	All Previous Systems
2	4	A21P41	Pediatrics I	طب الأطفال I	8	4	0	12	All Previous Systems
3	5	A21P54	Diagnostic Radiology	اشعة تشخيصية	3	2	0	3	All Previous Systems
4	4	A21P43	Internal Medicine I	باطنة عامة I	13	8	0	15	All Previous Systems
5	4	A21P44	General Surgery I	جراحة عامة I	13	8	0	15	All Previous Systems
6	4	A21P59	Emergency medicine	طب الطوارئ	3	2	0	3	Introduction to Pharmacology, All Previous Systems, All Previous clinical Subjects
7	5	A21P51	Anesthesia	التخدير	3	2	0	3	All Previous Systems
8	5	A21P52	Otorhino-laryngology (ENT)	انف، اذن وحنجرة	3	2	0	3	Introduction to Pharmacology, All Previous Systems, All Previous clinical Subjects
9	5	A21P53	Psychiatry	الطب النفسي	3	2	0	3	Behavior sciences
10	5	A21P55	Ophthalmology	العيون	3	2	0	3	Introduction to Pharmacology,
11	5	A21P56	Neurosurgery	الجراحة العصبية	3	2	0	3	All Previous Systems, All Previous clinical Subjects
12	5	A21P57	Dermatology	امراض جلدية	3	2	0	3	All Previous Systems Microbiology, Parasitology, Immunology
13	5	A21P58	Orthopedics	جراحة العظام	3	2	0	3	Musculo-skeletal System
14	6	A21P60	Internal Medicine II	باطنة عامة II	8	4	0	12	Internal Medicine I
15	6	A21P61	General Surgery II	جراحة عامه II	8	4	0	12	General Surgery I

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16	6	A21P62	Obstetrics & gynecology II	نساء وتوليد II	6	4	0	6	Obstetrics & Gynecology I
17	6	A21P63	Pediatrics II	طب الأطفال II	6	4	0	6	Pediatrics 1
17 Course					**97**	**58**	**0**	**117**	

Project Work Courses (1 courses/ 4 Cr. Hrs.)									
No	**Level-Sem.**	**Course Code**	**Course Name**	**اسم المقرر**	**Cr. Hrs.**	**L**	**P**	**T**	**Prerequisites, Co-requisites**
1	6	A21P64	Graduation Research	بحث التخرج	4	0	12	0	Research Methodology
Total					**4**	**0**	**12**	**0**	

16. Study Plan: Total Credit Hours =250 C.H

Level 1

No.	Block Name		Course Code	Courses included in the Block	المقررات الداخلة في البلك	NOW	Cr. Hrs.	L	P	T	Prerequisites, Co-requisites
1	-		A21U10	Islamic culture	ثقافة اسلامية	-	2	2	0	0	-
2	-		A21U11	National culture	ثقافة وطنية		2	2	0	0	-
3	-		A21U12	English Language 1	لغة انجليزية 1		2	2	0	0	-
4	-		A21U13	Arabic Language 1	لغة عربية 1		2	2	0	0	-
5	-		A21F13	Fundamental of Nursing	اساسيات التمريض		3	2	2	0	-
6	-		A21U14	Computer Skills	مهارات الحاسوب		3	2	2	0	-
7	-		A21P19	Community Medicine	طب مجتمع		3	3	0	0	-
8	-		A21F12	Communication Skills	مهارات التواصل		2	2	0	0	-
9	-		A21F11	Medical Ethics	اخلاقيات الطب		2	2	0	0	-
10	-		A21U15	Arabic Language 2	لغة عربية (2)		2	2	0	0	Arabic Language 1
11	-		A21U16	English Language 2	لغة انجليزية (2)		2	2	0	0	English Language 1
12	-		A21F10	Medical Terminology	مصطلحات طبية		2	2	0	0	English Language 1&2
13	-		A21U17	Arab and Israeli conflict	الصراع العربي الإسرائيلي		2	2	0	0	-
14	Introduction to Medical Basic	مقدمة العلوم الطبية الأساسية	A21P117	Introduction to Cell Biology and Histology	مقدمة في علم الخلية والانسجة	14	3	2	2	0	-
			A21P113	Introduction to Anatomy & Embryology	مقدمة في علم التشريح والاجنة		5	4	2	0	Introduction to Cell Biology and Histology
			A21P114	Introduction to Physiology	مقدمة في علم وظائف الأعضاء		3	3	0	0	

			A21P115	Biochemistry 1	كيمياء حيوية 1		3	2	2	0	-
15	Introduction to Medical Applied Sciences	مقدمة العلوم الطبية التطبيقية	A21P118	Microbiology	الاحياء الطبية الدقيقة	9	3	2	2	0	-
			A21P116	Introduction to Pathology	مقدمة في علم الأمراض		3	2	2	0	-
			A21P119	Introduction to Pharmacology	مقدمة في علم الأدوية		3	2	2	0	Physiology and Biochemistry
			A21P120	Medical Parasitology	علم الطفيليات الطبية		3	2	2	0	Introduction to Microbiology
			A21P121	Immunology	المناعة		3	2	2	0	Physiology Molecular Biology & Genetics
Total						-	58	48	20	0	

Level 2

No.	Block Name	Course Code	Courses included in the Block	المقررات الداخلة في البلك	NOW	Cr. Hrs.	L	P	T	Prerequisites, Co requisites
1	-	A21P20	Biochemistry 2	كيمياء حيوية 2	-	3	2	2	0	Biochemistry 1
2	Musculo-skeletal System	A21P21	Musculo-skeletal System	الجهاز الهيكلي العضلي	7	8	6	4	0	Physiology, Biochemistry, Anatomy Cell biology Histology, Pathology and Pharmacology
3	Gastro-intestinal system	A21P22	Gastro-intestinal system	الجهاز الهضمي	7	13	10	6	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology
4	Respiratory System	A21P23	Respiratory System	الجهاز التنفسي	7	8	6	4	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology.
5	Cardiovascular System	A21P24	Cardiovascular System	الجهاز الدوري القلبي	7	8	6	4	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology
6	-	A21P25	Nutrition	التغذية	-	3	2	2	0	Introduction to Biochemistry
7	-	A21P26	Medical Biostatistics	الاحصاء الطبي	-	2	2	0	0	Community Medicine
Total					-	45	34	22	0	

Level 3										
No.	Block Name	Course Code	Courses included in the Block	المقررات الداخلة في البلك	NOW	Cr. Hrs.	L	P	T	Prerequisites, Co-requisites
1	-	A21P30	Molecular Biology & Genetics	علم الاحياء الجزيئية والوراثة	-	2	2	0	0	NONE
2	-	A21P31	Health Management	إدارة صحية	-	2	2	0	0	Community Medicine, Medical Biostatistics
3	Genito-Urinary System	A21P32	Genito-Urinary System	الجهاز البولي والتناسلي	7	8	6	4	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology
4	-	A21P33	Research Methodology	مناهج البحث العلمي	-	2	2	0	0	Community Medicine, Medical Biostatistics
5	-	A21P34	Behavior Science	علوم سلوكية	-	2	2	0	0	-
6	Endocrine System	A21P35	Endocrine System	جهاز الغدد الصماء	7	8	6	4	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology
7	Central nervous System	A21P36	Central nervous System	الجهاز العصبي المركزي	9	10	8	4	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology
8	Haemato-lymphatic System	A21P37	Haemato-lymphatic System	جهاز الدم واللمف	5	5	4	2	0	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology.
Total					-	39	32	14	0	

Level 4									
No.	Block Code	Block Name	اسم البلوك	NOW	Cr. Hrs.	L	P	T	Prerequisites, Co-requisites
1	A21P40	Obstetrics & Gynecology I	نساء وتوليد I	7	8	4	0	12	All Previous Systems
2	A21P41	Pediatrics 1	طب الأطفال I	7	8	4	0	12	All Previous Systems
3	A21P42	Forensic & Clinical Toxicology	الطب الشرعي والسموم	-	3	2	0	3	All Previous Systems
4	A21P43	Internal Medicine I	باطنة عامة I	9	13	8	0	15	All Previous Systems
5	A21P44	General Surgery I	جراحة عامة I	9	13	8	0	15	All Previous Systems
Total				-	45	26	0	57	

Level 5

No.	Block Code	Course Name	اسم المقرر	NO W	Cr. Hrs.	L	P	T	Prerequisites, Co-requisites
1	A21P50	Public Health & Epidemiology	وبائيات وصحة عامة	-	4	3	2	0	Community Medicine, Medical Biostatistics, Health Management
2	A21P51	Anesthesia	التخدير	-	3	2	0	3	All Previous Systems
3	A21P52	Otorhino-laryngology (ENT)	أنف واذن وحنجرة	-	3	2	0	3	Introduction to Pharmacology, All Previous Systems, All Previous clinical Subjects
4	A21P53	Psychiatry	الطب النفسي	-	3	2	0	3	Behavior science
5	A21P54	Diagnostic Radiology	أشعة تشخيصية	-	3	2	0	3	All Previous Systems
6	A21P55	Ophthalmology	العيون	-	3	2	0	3	Introduction to Pharmacology,
7	A21P56	Neurosurgery	الجراحة العصبية	-	3	2	0	3	All Previous Systems, All Previous clinical Subjects
8	A21P57	Dermatology	امراض جلدية	-	3	2	0	3	All Previous Systems Microbiology, Parasitology, Immunology
9	A21P58	Orthopedics	جراحة العظام	-	3	2	0	3	Musculo-skeletal System
10	A21P59	Emergency medicine	طب الطوارئ	-	3	2	0	3	Introduction to Pharmacology, All Previous Systems, All Previous clinical Subjects
Total				-	31	21	2	27	

Level 6

No.	Block Code	Block Name	اسم البلوك	NO W	Cr. Hrs.	L	P	T	Prerequisites, Co-requisites
1	A21P60	Internal Medicine (II)	باطنة عامة (II)	7	8	4	0	12	Internal Medicine I
2	A21P61	General Surgery (II)	جراحة عامة (II)	7	8	4	0	12	General Surgery I
3	A21P62	Obstetrics & gynecology (II)	نساء وتوليد (II)	5	6	4	0	6	Obstetrics &Gynecology I
4	A21P63	Pediatrics (II)	طب الأطفال (II)	5	6	4	0	6	Pediatrics I
5	A21P64	Graduation Research	بحث التخرج	-	4	0	12	0	Research Methodology
Total				-	32	16	12	36	

Internship program 12 months		
No.	Training Sections	Duration
1	General surgery	2 months
2	Internal medicine	2 months
3	Obstetrics & gynecology	2 months
4	Emergency Medicine	1 month
5	Community Medicine	1 month
6	Special surgery	1 month
7	Special medicine	1 month
8	Pediatric	2 months
Total		12 months

1. Distribution of Total Credit Hours:

Level	Term	University Requirements		Faculty Requirements		Program Requirements		Training		Project		Total		Percentage of Cr. Hrs./ Level
		No of Courses	Credit Hours	No of Courses	Credit Hours	No of Courses	Credit Hours	No of Courses	Credit Hours	No of Courses	Credit Hours	No of Courses	Credit Hours	
First	First	8	17	4	9	10	32					22	58	23.20%
	Second													
Second	First					7	45					7	45	18.00%
	Second													
Third	First					8	39					8	39	15.60%
	Second													
Fourth	First					1	3	4	42			5	45	18.00%
	Second													
Fifth	First					1	4	9	27			10	31	12.40%
	Second													
Sixth	First							4	28	1	4	5	32	12.80%
	Second													
Total:		8	17	4	9	27	119	17	97	1	4	57	250	100.00%
Percentage of courses:		14.04%		7.02%		47.37%		29.82%		1.75%		100%		

1. Admission Requirements:

1. Admissions to the program shall be made as per the admission rules set by the Ministry of Education and Scientific Research as well as 21 September University admission guidelines.
2. General Secondary school certificate (Science Section) or any equivalent certificate with grade as specified in the admission rules made by Ministry of Education and Scientific Research.
3. Pass the aptitude test and personal interview if any.
4. Any necessary requirement for specialization, decided by the medicine faculty.

2. Attendance and Graduation Requirements:

1. Student attendance should not be less than **75 %**.
2. Student will graduate after successfully passing all program requirements.
3. Total credit hours for the program are **250** credit hours.
4. Minimum score for any student to pass any credit hours course is **65 %** marks.

3. Grading System:

From **90%** to **100%** of total marks	**Excellent**
From **80%** to less than **90%**	**Very Good**
From **70%** to less than **80%**	**Good**
From **65%** to less than **70%**	**Pass**
Less than **65%**	**Poor/Fail**

4. Facilities Required for Running the Program:

1. Sufficient Classrooms furnished with all necessary pieces and equipment.
2. Labs as per the course's specifications.
3. Computer Labs.
4. Academic and administrative staff offices.
5. Contracts with hospitals

5. Program Assessment:

	Type of the Sample who Assess the program	Instruments used	Sample
1	Students	**Questionnaire**	25 %
2	External examiner	**Questionnaire**	25 %
3	Graduated student evaluation	**Questionnaire**	25 %
4	Academic staff	**Reports**	25 %

6. Program Quality Standards:

- Continuous evaluation
- Workshops

7. Internal and external training to satisfy program standards::
- Internally: training in well-equipped labs - Externally: Training in hospital controlled by logbook

8. Program Policies:	
Based on University Regulations	
1.	**(Class Attendance):** A student should attend not less than 75 % of total hours of the subject; otherwise, he/she will not be able to take the exam and will be considered as exam failure. If the student is absent due to illness, he/she should bring a proof statement from university Clinic. If the absent is more than 25% of a course total contact hours, student will be required to retake the entire course again.
2.	**(Tardy):** For late in attending the class, the student will be initially notified. If he repeated lateness in attending class, he/she will be considered as absent.
3.	**(Exam Attendance/Punctuality):** A student should attend the exam on time. He/she is permitted to attend an exam half one hour from exam beginning, after that he/she will not be permitted to take the exam and he/she will be considered as absent in exam.
4.	**(Assignments & Projects):** Assignments and projects are given as per course specification; the student has to submit all the assignments for checking on time, mostly one week after given the assignment.
5.	**(Cheating):** For cheating in exam, a student will be considered as fail. In case the cheating is repeated three times during his/her study the student will be disengaged from the faculty.
6.	**(Plagiarism):** Plagiarism is the attending of a student the exam of a course instead of another student. If the examination committee proofed a plagiarism of a student, he/she will be disengaged from the faculty. The final disengagement of the student from the faculty should be confirmed from the Student Council Affair of the university or according to the university roles.
7.	**(Other policies):** - Mobile phones are not allowed to use during a class lecture. It must be closed; otherwise the student will be asked to leave the lecture room. - Mobile phones are not allowed in class during the examination. - Lecture notes and assignments might be given directly to students using soft or hard copy.

Republic of Yemen
Ministry of Education and scientific Research
21 SEPTEMBER University for Medical and Applied Sciences

الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة 21 سبتمبر للعلوم الطبية والتطبيقية

Annex- 1, Survey on the Strategic Orientations of the Department and Similar Departments, and their Alignment to the Strategic Orientations of the University and Faculty:

1- Mapping of program Vision to the University and Faculty Visions:

University Vision	Faculty of Medicine Vision	Medicine and surgery Program Vision
A contemporary University with National Responsibility and a Faith Identity.	A distinguished Medicine Faculty capable of competing locally and regionally	**No vision for the program.** But Mission

2- Mission of the Corresponding program and Suggested Mission: :(Benchmarks)

#	The Program	Mission
1.	**University of Science and Technology -Yemen**	Provide highly qualified physicians furnished with adequate knowledge, professional and research skills enabled to compete locally and regionally, committed to medical ethics and capable of continuing education, contributing to the improvement of health situation at the local and global level in partnership with pertinent organizations. This is realized by adopting advanced community-oriented curriculum and up-to-date techniques in accordance with the quality standards and academic accreditation.
2.	**Taiz University**	Preparing a qualified medical cadre committed to professional and ethical standards, capable of continuous learning and carrying out research to enhance the quality of healthcare services.

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#	The Program	Mission
3.	**Hadramout University**	To train and provide the graduates with knowledge, skills and behavior that enable them to cope with health challenges and changes at the national, regional and global levels.
4.	**Jordan University of Science and Technology**	Providing medical education by adopting modern teaching methods, committing to provide advanced health care, creating an active research environment, providing effective activities to serve the community, and enhancing cooperation and partnership with national and international medical and educational institutions.
5.	**Mohammed Bin Rashid university of medicine and health sciences**	to graduate competent and safe physicians well-prepared with the knowledge, skills and behaviors to serve individuals and communities and to pursue postgraduate training programs.
6.	**Tehran University of Medical Sciences**	to educate students at all levels and disciplines of the medical sciences in accordance with the highest educational standards. The university educates future medical doctors, dentists, pharmacists, and health scientists to work in diverse communities.
7.	**DUBLIN University**	To improve patient health by developing competent, caring doctors who are life-long learners, driven by scientific enquiry and the desire to serve society's evolving healthcare needs
8.	**21 September University for Medical and Applied Science**	Providing the community with distinguished doctors with human values and who play an educational, training, research and health role that qualifies them for professional competence at the highest levels, and who are capable of continuous self-learning, providing quality health care and sustainable research follow-up that supports engagement and interaction with the local and global medical community.

3- Mapping of program Mission to the University and Faculty Missions:

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University Mission	Faculty of Medicine Mission	Medicine and surgery Program Mission
Leading the transformation in the management and delivery of health care with all partners by setting a standard of excellence in education and medical and applied research in a way that meets the needs of Yemeni society, its specificity and regional influence.	The Faculty of Medicine be contemporary in providing a distinguished educational level based on creativity and innovation and a true partner in facing the main national health challenges and in treating patients with high quality based on research to solve problems that leads to integrated health care in an ethical context.	Providing the community with distinguished doctors with human values and who play an educational, training, research and health role that qualifies them for professional competence at the highest levels, and who are capable of continuous self-learning, providing quality health care and sustainable research follow-up that supports engagement and interaction with the local and global medical community.

4- Objectives (Educational) of the Corresponding program and Suggested Objectives:

#	The Program	Objectives
1.	**University of Science and Technology -Yemen**	1. Provide the community with highly qualified physicians furnished with excellent professional and research knowledge and skill. 2. Develop the program according to the quality standards and academic accreditation. 3. Provide conducive educational and research environment for the faculty members and students to conduct various scientific research to enhance the health situation. 4. Contribute to providing distinctive health services for the community. 5. Contribute with partners to building and developing a national health system based on scientific foundations methodology.
2.	**Taiz University**	1. Preparing qualified medical personnel committed to codes of ethics and professional conduct required in medical practice.

#	The Program	Objectives
		2. Fostering a culture of continuous learning among medical students to ensure they stay abreast of the latest advancements in healthcare. 3. Contributing to the improvement of community related healthcare services.
3.	**Hadramout University**	1. Graduation of a physician who is psychologically and behaviorally prepared to work efficiently in the field of curative, preventive and rehabilitative health. 2. Forming the integrated personality of the graduate and developing his ability to collect, analyze and conclude, and his ability to solve health problems in his community, think independently and take the appropriate decision. 3. Development and development of graduate doctors through practical practice, postgraduate programs and continuing education. 4. Encouraging and directing scientific research towards health problems in the region and harnessing its results to the relevant authorities to take the appropriate decision. 5. Active participation by the program students and its academic team in providing and developing direct health services with the aim of social development. 6. Planting the authentic human values and achievements of the Arab and Islamic civilization in the graduate's soul as an incentive to work in building the future, developing spirit and belief in the future of the Arab nation to make it capable of facing and overcoming problems in society.
4.	**University of Science and Technology - Jordan**	Graduated General Practitioners within few years of graduation will be able to: 1. Formulate and apply safe and effective management plans for major diseases and conditions. 2. Communicate effectively and sensitively with patients and patients' families, embodying ethical and professional standards. 3. Communicate and collaborate effectively with members of healthcare teams to provide optimal, interprofessional patient-centered care. 4. Commit to lifelong learning to keep pace with advances in healthcare practices and technologies. 5. Incorporate the social determinants of health into healthcare practices. 6. Lead, participate, and support preventive programs, management protocols, and research projects in their local and regional communities. 7. Appraise and comprehend effectivelythe health needs of their local and regional communities.

#	The Program	Objectives
		Facilitate the communication between local / international healthcare policymakers and the local community for an efficient, up-to-date, community-oriented medical service.
5.	**Mohammed Bin Rashid university of medicine and health sciences**	1. To ensure that students maintain the high academic and professional standards as expected of a healthcare professional. 2. To give the student a broad experience of the foundations of the practice of general and specialist medicine while still under supervision, thus providing a safer transition to post graduate medical practice. 3. To provide students with some flexibility of clinical practice through Selectives and an Elective 4. To give the College the opportunity to evaluate the performance of their students in the workplace. 5. Facilitate remediation for students of gaps (in knowledge, skills, and /or attitude) crucial to future safe practice.
6.	**Tehran University of Medical Sciences**	1-Show professional and competent behavior in their interactions with patients, those who accompany the Patient and all members of the care team. • In different clinical and crisis situations, attain the power of management, skill and confidence necessary to perform professional duties, as expected from a responsible physician • manage all patients with common, important to emergent complains and diseases, using the whole spectrum of medical skills from resuscitating and stabilizing the patient, to history taking, performing necessary physical examinations, and reaching differential diagnosis and going toward further steps. • Take the necessary steps to achieve the diagnosis and management of the patient and manage his or her complain appropriately. 8. • approach algorithmically Based on scientific evidence-based knowledge and "practical approved guidelines" on diagnostic and therapeutic measures, in accordance with the protocols of emergency medicine, as a responsible medical practitioner and efficient member of emergency ward team.
7.	**DUBLIN University**	To deliver ambitious educational programmes that both inspire and prepare our graduate for excellence in practice and for leadership roles in tomorrow's healthcare. 1.To conduct high quality translational and clinical research in areas of national significance and global importance.

#	The Program	Objectives
		2.To innovate in teaching and assessment, undertaking comprehensive education research to improve our programmes and inform national policy. 4.To attract and retain staff who are driven by the pursuit of excellence in academic and clinical practice and provide them with career progression opportunities. 5.To attract a diverse cohort of students and to offer elective opportunities around the world so that our graduates emerge competitive for careers in healthcare leadership roles and understand global perspectives. 6.To create graduates with the knowledge, skills and attitudes necessary for professional practice. 7.To build an enduring sense of community among our students, staff and alumni. 8.To support our education and research endeavours on campus by strengthening School infrastructure across our clinical training networks. 9.To maintain a strong effective organisation with resource allocation that is consistent with our School's strategic priorities. 10.To question continuously our assumptions and collect appropriate key performance data that supports informed decision-making and organisational development
8.	**21 September University for Medical and Applied Science**	1.Graduating competent doctors who possess the basic medical knowledge and skills to practice medicine with efficiency and serve the community. 2. Improve the practical and clinical skills with advanced scientific methods 3.Develop the students diagnostic and therapeutic skills in solving various health problems. 4. Develop students' critical thinking in clinical that influences the creativity and the ability to deal with versatile medical aspects. 5.Prepare graduates to become able Integrate into a team work with sincerity and integrity 6.Prepare the students with abilities and skills that qualify them to join higher studies and training programs that allow them to specialize, improve performance and professional development. 7.Enhancing the principles of professional, ethical and national responsibility among students. 8. Providing students with self-learning skills and using information technology, medical evidence and scientific research to keep pace with the latest developments in the field.

5- Mapping of program Objectives to the University and Faculty Objectives:

University Objectives	Faculty of Medicine Objectives	Medicine and surgery Program Objectives
1. Ensuring the application of quality standards and setting standards of excellence in medical and applied sciences, scientific research and community service. 2. The centrality of the student in the educational process, the partnership with them for life, the consolidation of the principles of national responsibility and faith identity, their care and the development of their capabilities after graduation and during work. 3. Attracting, employing and retaining scholars, cadres and highly specialized talents to gain minds and reverse the trend of "brain drain" in a way that promotes and ensures the creation of thinkers, businessmen and good citizens. 4. Continuous development of the distinguished academic infrastructure and the establishment of modern research and service centers with high efficiency and capable of making a real impact locally and regionally. 5. Enhancing the university's position as a preferred partner for local, regional and	1. Finding effective solutions for the university hospital, the infrastructure of the College and its annual budget. 2. Bridging the gap in the human resources adequately and efficiently, and developing them on a professional basis. 3. Improving the quality of the human medicine program to be met with the quality standards, national and international academic accreditation. 4. Strengthening the governance and management systems, consolidating the decentralization, and practicing the transparency and accountability. 5. Building up the students' abilities to think, analyze and solve the problems according to the research methods that qualify them for the labor market and achieve their practical and professional aspirations in future.	1.Graduating competent doctors who possess the basic medical knowledge and skills to practice medicine with efficiency and serve the community. 2. Improve the practical and clinical skills with advanced scientific methods 3.Develop the students diagnostic and therapeutic skills in solving various health problems. 4. Develop students' critical thinking in clinical that influences the creativity and the ability to deal with versatile medical aspects.

University Objectives	Faculty of Medicine Objectives	Medicine and surgery Program Objectives
international partnership through implementing innovative models of education, exchanging research and knowledge, and providing real and effective outcomes for developing professional practices to benefit from them locally and regionally.	6. Contributing in supporting the science-oriented research on the basis of planning related to the goals of comprehensive development in Yemen. 7. Forming real and effective partnership with the society, its institutions and the counterpart faculties at national, Arab and international level.	5.Prepare graduates to become able Integrate into a team work with sincerity and integrity 6.Prepare the students with abilities and skills that qualify them to join higher studies and training programs that allow them to specialize, improve performance and professional development. 7.Enhancing the principles of professional, ethical and national responsibility among students. 8. Providing students with self-learning skills and using information technology, medical evidence and scientific research to keep pace with the latest developments in the field.

6- Mapping of Program Values with the University and Faculty Values:

University Values	Faculty of Medicine Values	Medicine &surgery Program Values
1- **University Values:** 1. Leadership and influence 2- Excellence 3- Creativity 4- Teamwork	**Faculty Values:** 1. Professional 2. Continuous Education. 3. Appreciation of Science and Scientists. 4. Transparency and Accountability. 5. Team Work	**Program Values:** 1. Professional 2. Continuous Education. 3. Appreciation of Science and Scientists. 4. Transparency and Accountability. 5. Team Work

Annex- 2, Academic Standards Curriculum Criteria of Accreditation Board

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Council for Accreditation & Quality Assurance

National Academic Reference Standards (NARS) For Medical Sciences

Second Edition

Council for Accreditation & Quality Assurance, Yemen

June 2022

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National Academic Accreditation Standards For Medical Sciences

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Annex- 3, Unified Regulations for Student Affairs, Ministry of Education and Scientific Research

Attached Separately

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21 SEPTEMBER University for Medical and Applied Sciences

الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة 21 سبتمبر للعلوم الطبية والتطبيقية

Annex- 4, Survey of Similar Accredited Programs at National and International Universities (Benchmarks)

;ram o.	The Academic Program	The University	Website	The Faculty	The Department	The Country	Degree Award at Program Completion	Program Accrediting Body	Year of Accreditation	Study Duration
rent ;ram	**Medicine and surgery**	**21 September University**	**https://21umas.edu.ye**	**Medicine**	-	**Yemen**	**MBBS**		**2016**	**6 years and 1 year Internship**
1st ;ram	Medicine Program	University of Science and Technology (YUST)-Yemen	https:/www.ust.edu.ye/	Medicine and Health Sciences	Medicine	Yemen	MBBS			6
2nd ;ram	Medicine Program	Taiz university -Yemen	http:// www.taiz.edu.ye/	Medicine and Health Sciences	Medicine	Yemen	MBBS			6
3rd ;ram	Medicine Program	Hadramout University - Yemen	https:// www.hu.edu.ye	Medicine	Medicine	Yemen	MBBS			6
4rd ;ram	Medicine Program	Jordan University of Science and Technology (JUST)-Jordan	www.just.edu.jo	Medicine	Medicine	Jordan	MBBS	Higher Education Accreditation Commission (HEAC) Jordon	2011	6
5th ;ram	(MD) undergraduate	Mohammed Bin Rashid university of	https://www.mbru.ac.ae/	College of Medicine	Medicine	United Arabic	(MD) undergraduate	Accredited by Commission for Academic		6

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;ram o.	The Academic Program	The University	Website	The Faculty	The Department	The Country	Degree Award at Program Completion	Program Accrediting Body	Year of Accreditation	Study Duration
		medicine and health sciences				emirates (UAE)		Accreditation (CAA) since Jan 2016.		
: 6th ;ram	Medicine Program	Tahran University-Iran	https://en.tums.ac.ir/en	Medicine and Health Sciences	Medicine	IRAN	MBBS	Accreditation Services for International Colleges (ASIC) as a "premier university" National High Council for Planning of health and Medical Sciences.		**5.5 to 7**
: 7th ;ram	Medicine Program	Dublin University-Ireland-UK	https://www.ucd.ie	Medicine and Health Sciences	Medicine	IRELAND-UK	MBBS	The National University of Ireland (NUI) , Accredited provider of healthcare education in Europe.		**6**

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Center of Development & Quality Assurance

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Republic of Yemen
Ministry of Education and scientific Research
21 SEPTEMBER University for Medical and Applied Sciences

الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة 21 سبتمبر للعلوم الطبية والتطبيقية

Annex- 5, Survey on Mission and Objectives of the Program and Similar Accredited Programs and its Alignment to the University, Faculty, and Department Missions and objectives

1- Survey on Mission and Objectives of the Program and Similar Accredited Program

University	University of Sciences and Technology	Hadramout University - Yemen	Taiz university -Yemen	Jordan University of Science and Technology	Mohammed Bin Rashid university of medicine and health sciences	TAHRAN UNIVERSITY-IRAN	DUBLIN UNIVERSITY-IRELAND-UK	21 Sep. University
Faculty	Medicine & Health Sciences	Medicine &Health Sciences	Medicine &Health Sciences	Medicine &Health Sciences	College of Medicine	Medicine &Health Sciences	Medicine	Medicine
Department	Medicine	Medicine	Medicine	Medicine	Medicine	Medicine	Medicine	-
Program	Medicine and Surgery	Medicine	Medicine	Medicine	(MD) undergraduate	Medicine and Surgery	Medicine	Medicine and Surgery
Country	Yemen	Yemen	Yemen	Jordan	UAE	IRAN	IRELAND -UK	Yemen
Program Mission	Provide highly qualified physicians furnished with adequate knowledge,	To train and provide the graduates with knowledge, skills and behavior that	Preparing a qualified medical cadre committed to	Providing medical education by adopting modern teaching methods, committing to provide advanced health care, creating	to graduate competent and safe physicians well-prepared with the knowledge,	to educate students at all levels and disciplines of the medical sciences in accordance	To improve patient health by developing competent, caring	Providing the community with distinguished doctors with human values and who play an educational,

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	professional and research skills enabled to compete locally and regionally, committed to medical ethics and capable of continuing education, contributing to the improvement of health situation at the local and global level in partnership with pertinent organizations. This is realized by adopting advanced community-oriented curriculum and up-to-date	enable them to cope with health challenges and changes at the national, regional and global levels.	professional and ethical standards, capable of continuous learning and carrying out research to enhance the quality of healthcare services.	an active research environment, providing effective activities to serve the community, and enhancing cooperation and partnership with national and international medical and educational institutions.	skills and behaviors to serve individuals and communities and to pursue postgraduate training programs.	with the highest educational standards. The university educates future medical doctors, dentists, pharmacists, and health scientists to work in diverse communities.	doctors who are life-long learners, driven by scientific enquiry and the desire to serve society's evolving healthcare needs	training, research and health role that qualifies them for professional competence at the highest levels, and who are capable of continuous self-learning, providing quality health care and sustainable research follow-up that supports engagement and interaction with the local and global medical community.

	techniques in accordance with the quality standards and academic accreditation.							
Program Objectives	1. Provide the community with highly qualified physicians furnished with excellent professional and research knowledge and skill. 2. Develop the	1. Graduation of a physician who is psychologically and behaviorally prepared to work efficiently in the field of curative, preventive and rehabilitative health. 2. Forming the integrated personality of the graduate and developing his ability to	1.Preparing qualified medical personnel committed to codes of ethics and professional conduct required in medical practice. 2.Fostering a culture of continuous learning among medical students to ensure they stay abreast of the latest advancement	Graduated General Practitioners within few years of graduation will be able to: 1.Formulate and apply safe and effective management plans for major diseases and conditions. 2.Communicate effectively and sensitively with patients and patients' families, embodying ethical and professional standards. 3.Communicate and collaborate effectively with members of healthcare	1. To ensure that students maintain the high academic and professional standards as expected of a healthcare professional. 2. To give the	1-Show professional and competent behavior in their interactions with patients, those who accompany the Patient and all members of	To deliver ambitious educational programmes that both inspire and prepare our graduate for excellence in practice and for leadership roles in tomorrow's healthcare. 1.To conduct high quality translational and clinical research in area of national	1.Graduating competent doctors who possess the basic medical knowledge and skills to practice medicine with efficiency and serve the community. 2. Improve the practical and clinical skills with advanced scientific methods 3.Develop the students diagnostic and therapeutic skills

	program according to the quality standards and academic accreditation. 3. Provide conducive educational and research environment for the faculty members and students to conduct various scientific research to enhance	collect, analyze and conclude, and his ability to solve health problems in his community, think independently and take the appropriate decision. 3. Development and development of graduate doctors through practical practice, postgraduate programs and continuing education. 4. Encouraging and directing scientific research towards health	s in healthcare. 3.Contributing to the improvement of community related healthcare services.	teams to provide optimal, interprofessional patient-centered care. 4.Commit to lifelong learning to keep pace with advances in healthcare practices and technologies. 5.Incorporate the social determinants of health into healthcare practices. 6.Lead participate, and support preventive programs, management protocols, and research projects in their local and regional communities. 7.Appraise and comprehend effectively the health needs of their local and regional communities.	student a broad experience of the foundations of the practice of general and specialist medicine while still under supervision, thus providing a safer transition to post graduate medical practice. 3. To provide students	the care team. • In different clinical and crisis situations, attain the power of management, skill and confidence necessary to perform professional duties, as expected from a respons	significance and global importance. 2.To innovate in teaching and assessment, undertaking comprehensive education research to improve our programmes and inform national policy. 4.To attract and retain staff who are driven by the pursuit of excellence in academic and clinical practice and provide them with career	in solving various health problems. 4. Develop students' critical thinking in clinical that influences the creativity and the ability to deal with versatile medical aspects. 5.Prepare graduates to become able Integrate into a team work with sincerity and integrity 6.Prepare the students with abilities and skills that qualify them to join higher studies and training programs that allow them to specialize, improve performance and

	the health situation. 4. Contribute to providing distinctive health services for the community. 5. Contribute with partners to building and developing a national health system based on scientifi	problems in the region and harnessing its results to the relevant authorities to take the appropriate decision. 5. Active participation by the program students and its academic team in providing and developing direct health services with the aim of social development. 6. Planting the authentic human values and achievements of the Arab and Islamic		8.Facilitate the communication between local / international healthcare policymakers and the local community for an efficient, up-to-date, community-oriented medical service.	with some flexibility of clinical practice through Selectives and an Elective 4. To give the College the opportunity to evaluate the performance of their students in the workplace. 5. Facilitate remediat	ible physician • manage all patients with common, important to emergent complains and diseases, using the whole spectrum of medical skills from resuscitating and stabilizing the patient, to history	progression opportunities. 5.To attract a diverse cohort of students and to offer elective opportunities around the world so that our graduates emerge competitive for careers in healthcare leadership roles and understand global perspectives 6.To create graduates with the knowledge, skills and attitudes necessary for	professional development. 7.Enhancing the principles of professional, ethical and national responsibility among students. 8. Providing students with self-learning skills and using information technology, medical evidence and scientific research to keep pace with the latest developments in the field.

	c foundations methodology.	civilization in the graduate's soul as an incentive to work in building the future, developing spirit and belief in the future of the Arab nation to make it capable of facing and overcoming problems in society.			ion for students of gaps (in knowledge, skills, and /or attitude) crucial to future safe practice.	taking, performing necessary physical examinations, and reaching differential diagnosis and going toward further steps. • Take the necessary steps to achieve the diagnosis and management of the patient	professional practice. 7.To build an enduring sense of community among our students, staff and alumni. 8.To support our education and research endeavours on campus by strengthening School infrastructure across our clinical training networks. 9.To maintain a strong effective organisation with resource allocation that is	

						and manage his or her compla in appropr iately. • approach algorith mically Based on scientif ic evidenc e-based knowle dge and "practic al approv ed guideli nes" on diagnos tic and therape utic measur es, in accorda	consistent with our School's strategic priorities. 10.To question continuousl y our assumption s and collect appropriate key performanc e data that supports informed decision-making and organisatio nal developme nt	

						nce with the protocols of emergency medicine, as a responsible medical practitioner and efficient member of emergency ward team.		
Program ILOs	**A. Knowledge and Understanding** By the end of the program,	**A- <u>Knowledge & understanding</u>** The graduate will be able to :	A: Knowledge and Understanding : At the end of the program, the student is	**<u>Intended Learning Objectives (ILO)</u>** **At the time of graduation, students will be able to:** **<u>Demonstrate</u>** a sufficient understanding of the structural organization	**Program learning outcomes** 1. Practice in a safe and	**<u>Clinical and Professional Skills</u>** Developing and maintaining	**<u>Programme Outcomes</u>** 1- Possess and apply in-depth knowledge of the core	**A. KNOWLEDGE AND UNDERSTANDING** Upon successful completion of an undergraduate

	the graduate should be able to: A1) Describe the normal structure, function, growth and developme nt of the human body and alterations of the various organ system of the body and mind in health and diseases as well as basic knowledge and concepts of other	A1- Recognize the principles, knowledge and methods learnt in basic medical sciences. A2- Explain the principles, knowledge and methods of population health and the improveme nt of health and healthcare. A3- Recognize the principles,	expected to be able to: A1 : Describe scientificall y the human body's structure, function, and developmen tal progression through the integration of foundational basic sciences, and relate this knowledge for disease diagnosis, therapeutic intervention s, and patient care. A2 : Explain clearly the pathophysio	and functions of the following systems of the human body: circulatory, respiratory, gastrointestinal, endocrine, hematopoietic & lymphatic, musculoskeletal, nervous, and genitourinary systems. **Conceptualize** the cellular, molecular, genetic, and biochemical mechanisms that maintain the body's homeostasis and their derangements in disease states. **Apply** their knowledge of human anatomy and function to solve questions regarding major clinical cases and diseases. **Attain** appropriate and systematic clinical history of different medical conditions and settings.	competent manner a. Describe normal human develop ment, structure , function and behavior . b. Explain mechani sms of abnorma l develop ment, structure , function and behavior underlyi ng human disease.	professional behaviors Develop interp ersonal and communicatio n skills for an effective collaboration with patients, their families Develop skills for evidence based learning and practice Ability to use the latest scientific resources and make use of new information in their work Practical ability to diagnosis and management of common medical problems and/	biomedical and clinical sciences that underpin the practice of medicine. 2 - Be able to maintain and enhance professiona l activities through lifelong learning. 3 - Critically evaluate information and its sources and apply this appropriatel y in their decision making. 4 - Facilitate the learning of patients, families, junior colleagues,	medical education program, the graduates will be able to: A1. Describe the general and basic sciences related to human body structure and functions with emphasis on normal and abnormal conditions. A2. Identify the progress of human body through all stages of development, alteration of structure and function during these stages and indication for surgical or non-surgical intervention and the role of treatment in healing or curing the diseases.

	related sciences. A2) Identify the determinants of health, natural history of diseases. A3) List the clinical, lab features, complications, principles of prevention and management of common and life-threatening illnesses including the traumatic conditions,	knowledge and methods of social sciences . A4- Recognize the psychlogical principles, knowledge and methods. A5- Identify the scientific methods and approaches to medical research.	logical changes of diseases, and demonstrate how this knowledge guide clinical decision-making in disease management and prevention according to local and global guidelines and ethical consideration. B: Intellectual Skills: At the end of the program, the student is expected to be able to:	**Demonstrate** proficiency in performing clinical skills and procedures. **Perform** relevant physical examinations on patients professionally and ethically. **Identify** the major signs and symptoms of disease states, recognizing risk factors and etiologies, in an interdisciplinary approach to differentially diagnose patients. **Order** and **interpret** results of relevant basic diagnostic procedures, such as laboratory investigations and conventional imaging procedures. **Apply** safe and accurate methods of pharmacotherapy in the disease states.). Critically **appraise** research studies	c. Apply principles of normal and abnormal development, structure, function and behavior in the recognition of disease conditions. d. Apply principles of normal and abnormal development, structure, function	or emergency diseases	other health professionals, the public, and others, as appropriate. 5 - Contribute to the creation, dissemination, application, and translation of new medical knowledge and practices through research and audit. 6 - Recognise personal and professional limits of knowledge and competence and consult appropriately.	A3. Explain the pathological and pathogenesis changes in various diseases, and their etiological triggers including genetic, developmental, infectious, metabolic, endocrinal, autoimmune, neoplastic, traumatic, degenerative and occupational factors. A4. Recognize the local and international guidelines, ethics, disease management, prevention and other risk factors that affect community health. **B.COGNITIVE**

and identify uses of drugs and their adverse reactions and interactions . A4) Describe the population demography, cultural and socioeconomic constitution , circumstances of living, health status , and general culture; and identify how to gather	**B- Intellectual skills** The graduate will be able to: B1- Carry out a consultation session with a patient. B2- Prescribe drugs safely, effectively and rationally. B3- Use information effectively in a	B1: Utilize critical analysis to select management modules, interpret patient's data for effective plans, and demonstrate proficiency in health care planning, service prioritization, and disease prevention. C: Professional and Practical Skills: At the end of the program, the student is expected	guided by evidence-based medicine. 1. **Demonstrate** a bility to work in diverse settings and communities.	and behavior in the prevention and treatment of disease. e. Comprehend and apply principles of safe patient care and clinical governance. 2. Observe ethical and professional standards a. Describe the principles of		7 - Establish and maintain the clinical skills to perform a complete and appropriate patient centred assessment of a patient and to use therapeutic interventions effectively. 8 - Have acquired proficient practical skills for diagnostic and therapeutic use as required of an intern in practice. 9 - Understand and accept the roles	/INTELLECTUAL SKILLS Upon successful completion of an undergraduate medical education program, the graduates will be able to: B1. Compare between normal and abnormal conditions and predict the appropriate treatment or intervention. B2. Analyze and interpret the finding from history, clinical examination and investigations to propose a diagnosis and develop a shared management plan for common acute, chronic and urgent physical and

	health information about population. A5) Recognize the theories and principles that govern ethical issues and decision making and the medico-legal aspects of medical practice. **B. Intellectual Skills** By the end of the program, the graduate	medical context C- **Practical and professional skills:** The graduate will be able to: C1- Diagnose and manage clinical presentations. C2- Provide immediate care in medical emergencies and outpatient department.	to be able to: C1: Conduct a thorough patient history, physical examination and appropriate investigations, performing common medical procedures safely and competently for efficient treatment. C2: Skillfully and safely compose medical prescription, while also applying practical and clinical skills effectively		biomedical ethics. b. Apply the principles of biomedical ethics in patient-centered care. c. Demonstrate professional behavior towards self, patients, colleagues, and society.		and responsibilities of the doctor as defined by the Medical Council or other professional regulatory body. 10 - Be committed to the professional ethical and legal codes of practice. 11 - Be committed to physician health and wellbeing including self. 12 - Possess team working skills to promote and maintain the	mental health presentations. B3. Explore to medical practice the principles, method and knowledge of population health and the improvement of health and healthcare. **C. PRACTICAL AND PROFESSIONAL SKILLS:** Upon successful completion of an undergraduate medical education program, the graduates will be able to: C1. Perform complete clinical

	will be able to: B1) Integrate basic biomedical sciences with clinical conditions and care. B2) Integrate the result of history, physical, laboratory tests and diagnostic procedures findings into a meaningful diagnostic formulation. B3) Formulate a	C4- Carry out practical procedures safely and effectively. C5- Behave according to ethical and legal principles as described by the regulatory and professional bodies. C6- Reflect, learn and teach others towards ensuring that patients and communiti	to anticipate, prevent, and manage potential complications. C3: Effectively analyze medical data, document patient records and apply research principles to address health issues efficiently. D.Transferable Skills: At the end of the program, the student is expected to be able to: D1: Effectively		3. Practice evidence-based medicine and engage in scholarship and generation of new knowledge a. Comprehend the principles of research methods and evidence-based medicine. b. Identify and critique relevant research findings and		effectiveness of the multidisciplinary team in healthcare provision. 13 - Develop and maintain communication skills to support all roles. 14 - Possess the capacity to develop management and leadership skills over time in the knowledge of the	examination and precise investigations to reach the final diagnosis C2. Prescribe appropriate drugs taking in mind the benefits, side effects, interactions, safety and availability. C3. Carry out routine medical procedure and demonstrate the ability of using common medical tools required for diagnosis and management with highly qualified competency. **D. GENERAL**

	plan for management and discharge, according to the established and evolving principles and evidence, in partnership with the patient, their relatives, and other health professionals as appropriate. B4) Recognize his function as a mentor and teacher including contributin	es receive the highest level of professional care. **D- General and transferable skills:** The graduate will be able to: D1- Communicate effectively with patients, families, communities and colleagues in a medical context.	communicate with healthcare professionals, patients, families, and the community with high respect for to diversity by recognizes the influence of factors like gender, religion and cultural beliefs on decision making considering ethical issues. D2: Work as an effective member of health care team ,acquire leadership		medical literature. c. Formulate a hypothesis and design a research proposal. d. Synthesize and apply key research findings in the care of patients and society. 4. Communicate clearly and effectively			**TRANSFERABLE SKILLS** Upon successful completion of an undergraduate medical education program, the graduates will be able to: D1. Communicate with professionals, patients, their families and the community through verbal, written and other non-verbal means. D2. Work individually or in a team and develop lifelong

	g to the appraisal, assessment and review of colleagues C. **Professional and Practical Skills** By the end of the program, the graduate will be able to: C1) Perform and document an accurate medical history and perform complete organ	D2- learn and work effectively within a multi-professional team.	and adaptation skills and develop lifelong learning using up-dated technologies that help in diseases control and prevention.		a. Comprehend the principles of effective communication with patients and colleagues. b. Demonstrate appropriate oral, written and electronic communication skills with various groups and within different clinical			learning using up to date technology that help in understanding the diseases and its control and prevention. D3. Respect the different cultural beliefs, ethics, personalities, privacy and values for patients and community with a good behavior and follow the institutional and national roles of medical practice

system and mental examination and request appropriate and relevant laboratory investigations to determine differential diagnosis. C2) Develop appropriate management plans for patients with common conditions, both acute and chronic, including medical, psychiatric, and				and cultural contexts. c. Demonstrate the ability to manage and resolve conflicts. 5. Advocate for health promotion of individuals and communities a. Comprehend the principles of epidemiology and social determinants of health and disease.				

surgical conditions, and those requiring short- and long-term rehabilitation. C3) Perform routine technical and therapeutic procedures needed for daily medical practice under supervision and start appropriate initial therapy for patients with immediate life threatening				b. Identify opportunities for health advocacy in society. c. Identify barriers to health care access and their impact on the patient and population level. d. Apply principles of health advocacy in the care of patients and communities.			

conditions taking into account the patient safety and cost effectiveness of care. C4) Provide promotive and preventive care, and counseling to the patient and his relative as well as community. C5) Write research proposal, conduct descriptive research under supervision, and				6. Distinguish various healthcare systems and their management. a. Describe the principles of healthcare system structure and function. b. Describe the evolution and present trends in healthcare management. c. Evaluate and compare different healthcare systems. 7. Educate and share			

	present data. C6) Recognize own personal and professional limits and seek help from colleagues and supervisors when necessary. C7) Respect patients' rights, cultural believes, values and privacy and involve them in decisions, and treat all patients				knowledge and skills. a. Comprehend the principles of adult teaching and learning. b. Identify opportunities for knowledge-sharing and teaching. c. Demonstr effective and kn transfer to peers, and so 8. Participate effectively in multidisciplinary teams. a. Comprehend the principles of			

equally regardless their believes, culture or behaviors **D. General Skills** By the end of the program, the graduate will be able to: D1) Work effectively in a team through systems, collaborate with other members of the health care team, and accept appropriate responsibili				effective teamwork. b. Demons trate the ability to work effectively and respectfully in a team. c. Criticall y and honestly evaluate colleagues and self. 9. Demonstrate commitment life- long, self-directed learning and performance improvement. a. Recogni ze gaps in one's own			

	ty for the health of populations & participate in community activities directed at improving health. D2) Determineh is/her learning needs for personal and professiona l developme nt; demonstrat e an enthusiasm to take up opportuniti es for effective learning				knowledge and skills. b. Identify and engage with opportuniti es for self-directed learning. c. Apply new evidence to improve clinical practice and services.			

new things on their own. D3) Use computer-based instructional tools, including electronic tutorials and patient simulations . D4) Effectively, communicate verbally and non-verbally with patients and their families and his/her colleagues taking in his/her considerati							

	on difficult circumstances and sensitive issues.							

Annex- 6, Faculty Departments:

No.	Department Name	No.	Department Name
1	Anatomy and Embryology	13	Psychiatry
2	Histology and cell biology	14	Dermatology
3	Medical Biochemistry	15	Radio Diagnostic and Medical Imaging
4	Physiology	16	Pediatrics
5	Medical Pharmacology	17	Obstetrics & Gynecology
6	Pathology	18	Surgery
7	Community Medicine	19	Orthopedics Surgery
8	Forensic Medicine and Clinical Toxicology	20	Microbiology and immunology
9	Ophthalmology	21	Medical Parasitology
10	Ear, Nose and Throat	22	Urology
11	Internal Medicine	23	Emergency Medicine & Anesthesia
12	Neurosurgery		

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Annex-7, Alignment of Program Intended Learning Outcomes (PILOS) to Program Objectives (POs)

Program PILOs	Program Objectives							
	POBj1	POBj2	POBj3	POBj4	POBj5	POBj6	POBj7	FObj8
A1	√	√			√	√		√
A2	√	√	√			√		
A3	√	√	√	√		√		
A4							√	
B1	√	√		√				
B2	√	√	√	√				
B3		√	√			√		
C1		√	√					√
C2	√	√	√					√
C3			√	√				√
D1					√		√	√
D2					√		√	√
D3					√		√	√

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Annex- 8, Mapping of Program Objectives to the Faculty Mission

Program Objectives	Faculty Mission
PObj1	✓
PObj2	✓
PObj3 + PObj4	✓
PObj5	✓
PObj6	✓
PObj7	✓
PObj8	✓

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Annex- 9, Survey of PILOs for Similar Accredited Programs at National and International Universities

Program PILOs	Similar Accredited Programs					
	University of sciences and technology	Hadramout University	Taiz University	Jordan University of Science and Technology	Tehran University	DUBLIN University
A1	√	√	√	√		√
A2	√	√	√	√	√	√
A3	√	√	√		√	
A4			√		√	
B1	√	√	√	√		√
B2	√	√	√	√	√	√
B3	√	√	√			√
C1	√	√	√	√	√	√
C2	√	√	√	√	√	√
C3	√	√	√	√	√	√
D1	√	√		√	√	√
D2	√	√	√	√	√	
D3	√	√	√		√	√

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Annex- 10, Alignment of Program PILOs with Council of Accreditation and NARS Standards

Accreditation Body: National Academic Reference Standards (NARS), Yemen, 2022.

Program PILOs	NARS (Yemen), ILOs for Undergraduate Medical Programs												
	Knowledge and Understanding				Intellectual Skills			Professional and Practical Skills			Transferable Skills		
	A1	A2	A3	A4	B1	B2	B3	C1	C2	C3	D1	D2	D3
A1	•												
A2		•											
A3			•										
A4				•									
B1					•								
B2						•							
B3							•						
C1								•					
C2									•				
C3										•			
D1											•		
D2												•	
D3													•

1- **National Academic Reference Standards for Medicine Programs, Yemen,2022.**

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I. GRADUATE ATTRIBUTES

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

1. Healthcare provider: providing patient-centered high-quality care efficiently, effectively and safely within their defined scope and limits of their expertise and within the context of healthcare system.
2. Professional: Adhering to ethical, professional, and legal standards, demonstrating a commitment to the patients, profession and society, and to their wellbeing and lifelong personal and professional development.
3. Scholar: Using the medical knowledge and health research to meet the needs of patients, healthcare system, and society.
4. Health Advocate: contributing to prevent illness and promote the health and well-being of their patients, and society.
5. Communicator & Collaborator: Communicating effectively with patients and their families, healthcare team and the society, and collaborating inter professionally, working as both a team member and a leader.

II. LEARNING OUTCOMES

A. KNOWLEDGE AND UNDERSTANDING

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

A1. Describe the general and basic sciences related to human body structure and functions with emphasis on normal and abnormal conditions.
A2. Identify the progress of human body through all stages of development, alteration of structure and function during these stages and indication for surgical or non-surgical intervention and the role of treatment in healing or curing the diseases.
A3. Explain the pathological and pathogenesis changes in various diseases, and their etiological triggers including genetic, developmental, infectious, metabolic, endocrinal, autoimmune, neoplastic, traumatic, degenerative and occupational factors.
A4. Recognize the local and international guidelines, ethics, disease management, prevention and other risk factors that affect community health.

B. COGNITIVE/INTELLECTUAL SKILLS

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

B1. Compare between normal and abnormal conditions and predict the appropriate treatment or intervention.
B2. Analyze and interpret the finding from history, clinical examination and investigations to propose a diagnosis and develop a shared management plan for common acute, chronic and urgent physical and mental health presentations.

B3. Explore to medical practice the principles, method and knowledge of population health and the improvement of health and healthcare

C. PRACTICAL AND PROFESSIONAL SKILLS:

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

C1. Perform complete clinical examination and precise investigations to reach the final diagnosis

C2. Prescribe appropriate drugs taking in mind the benefits, side effects, interactions, safety and availability.

C3. Carry out routine medical procedure and demonstrate the ability of using common medical tools required for diagnosis and management with highly qualified competency.

D. GENERAL / TRANSFERABLE SKILLS

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

D1. Communicate with professionals, patients, their families and the community through verbal, written and other non-verbal means.

D2. Work individually or in a team and develop lifelong learning using up to date technology that help in understanding the diseases and its control and prevention.

D3. Respect the different cultural beliefs, ethics, personalities, privacy and values for patients and community with a good behavior and follow the institutional and national roles of medical practice

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Annex- 11, Survey of Credit Hours of Similar Programs

Benchmarking		21 SEPTEMBER. University	University of sciences and technology	HADRAMOUT University	TAIZ University	Jordan University of Science and Technology	Mohammed Bin Rashid university of medicine and health sciences	Tehran University	DUBLIN University
University Requirements	Credit Hours	17	25	14	12	16	----	----	----
	Percentage	6.80%	8.90%	6%	5.43%	6.23%	----	----	----
University Electives	Credit Hours	----	----	----	----	9	----	----	----
	Percentage	----	----	----	----	3.50%	----	----	----
Faculty Requirements	Credit Hours	9	7	224	5	16	----	----	----
	Percentage	3.60%	2.50%	94%	2.26%	6.23%	----	----	----
Faculty Electives	Credit Hours	----	----	----	----	----	----	----	----
	Percentage	----	----	----	----	----	----	----	----
Department Requirements	Credit Hours	----	----	224	----	----	----	----	----
	Percentage	----	----	----	----	----	----	----	----
Major Requirements	Credit Hours	123	249	----	95	216	224	220.35	320
	Percentage	49.20%	88.60%	----	42.99%	84.04%	----	----	----
Major Electives	Credit Hours	----	----	----	----	----	----	----	50
	Percentage	----	----	----	----	----	----	----	----
Practical Courses	Credit Hours	----	----	113	----	----	----	----	----
	Percentage	----	----	47%	----	----	----	----	----
Training Courses	Credit Hours	97	----	----	105	----	----	----	----
	Percentage	38.80%	----	----	47.51%	----	----	----	----
Project Courses	Credit Hours	4	----	----	4	----	----	----	----
	Percentage	1.60%	----	----	1.81%	----	----	----	----

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Benchmarking		21 SEPTEMBER. University	University of sciences and technology	HADRAMOUT University	TAIZ University	Jordan University of Science and Technology	Mohammed Bin Rashid university of medicine and health sciences	Tehran University	DUBLIN University
Total Credit Hours	Credit Hours	250	281	238	221	257	224	220.35	370

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Annex- 12, Survey of Number of Courses and Credit Hours of Similar Programs

University		21 SEPTEMBER. University		University of sciences and technology		HADRAMOUT UNI		TAIZ University		Jordan University of Science and Technology		Mohammed Bin Rashid university of medicine and health sciences		Tehran University		DUBLIN University		Average	
Total Courses and Cr. Hrs.		Cr. Hrs.	Courses	Cr. Hrs.	Courses	Courses	Cr. Hrs.	Cr. Hrs.	Courses	Cr. Hrs.	Courses	Cr. Hrs.	Courses	Cr. Hrs.	Courses	Cr. Hrs.	Courses	Cr. Hrs.	Courses
University Requirements	Compulsory	17	8	16	8	14	7	12	6	16	6	----	----	----	----	--	--	12.75	8.5
	Electives	--	--	9	3	--	--	--	--	9	3	----	----	----	----	--	--	9	3
Faculty Requirements	Compulsory	9	4	7	3	--	--	5	3	16	6	----	----	----	----	--	--	9.33333333	4
	Electives	--	--	----	----	--	--	--	--	--	--	----	----	----	----	--	--	----	--
Department Requirements	Compulsory	--	--	----	----	--	--	--	--	--	--	----	----	----	----	--	--	----	--
	Electives	--		----	----	--	--	--	--	--		----	----	----	----	--	--	----	--
Major Requirements	Compulsory	123	27	249	38	224	34	95	24	216	42	224	56	220.35	83	310	49	192.621429	73.7142857
	Electives	--	--	----	----	--	--	--	--	--	--	----	----	----	----	50	12	50	12
	Graduation Project	4	1	----	----	--	--	4	2	--	--	----	----	----	----	--	--	4	2
	Summer Training	--	--	----	----	--	--	--	--	--	--	----	----	----	----	--	--	----	--
	Training	97	17	----	----	--	--	105	26	--	--	----	----	----	----	--	--	105	26

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	Practical Skills	--	--	----	----	--	--	--	--	--	--	----	----	----	----	--	--	----	--
Total	**Cr. Hrs.**	**Courses**	**Cr. Hrs.**	courses	**Cr. Hrs.**	**Courses**	**Cr. Hrs.**	**Courses**	**Cr. Hrs.**	**Courses**	**Cr. Hrs.**	**Courses**	**Cr. Hrs.**	**Courses**	**Cr. Hrs.**	**Courses**	**Cr. Hrs.**	**Courses**	**244.478571**	**59.142857 1**
	250	**57**	**281**	52	**238**	**41**	**221**	**61**	**257**	**60**	**224**	**56**	**220.35**	**83**	**270**	61				

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Annex- 13, Themes of Courses of Study and their Weightage

#	Themes	No. of Courses	Credit Hours	Percentage of Cr. Hrs.
1	University Requirements	8	17	6.80%
2	Faculty Requirements	4	9	3.60%
3	Program Compulsory Courses	27	123	49.20%
4	Program Elective Courses	0	0	0.00%
5	Graduation Project Courses	1	4	1.60%
6	Field Training	17	97	38.80%
Program Total		57	250	100.00%

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Annex14 -, Coding System

The course code consists of three character + three digits

Abbreviation of character code:

A21U
A21F
A21P

The three digits:

- First digit for Level
- Second digit for Semester; and
- Third digit for Course No.

Example:

Islamic Culture (A21U11)

University Requirement	Level	Course No.
A A21U	1	1

Medical Terminology(A21F13)

Faculty Requirement	Level	Course No.
A21F	1	3

Musculoskeletal System(A21P26)

System Courses	Level	Course No.
A21P	2	6

Internal Medicine II A21P41

Major Requirement	Level	Course No.
A21P	4	1

Annex15 -, Survey of Course Names per Academic Semesters of Similar Programs

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University	21 SEPTEMBER.	University of Sciences and Technology	Hadramout University	Taiz University	Jordan University of S3cience and Technology	Mohammed Bin Rashid university of medicine and health sciences	DUBLIN UNIVERSITY-IRELAND-UK	Tehran University of Medical Sciences
No of Courses	57	52	41	61	60	56	61	83
Total Cr. Hrs.	250	281	238	221	257	224	360	220.35
Total Years	1+6	6 + 1	6 + 1	6 + 1	6 + 1	6	6	5.5 + 1
	Level 1							
No	Course Name	Course Name	Course Name	Course Name	Course Name	Course Name	Course Name	Course Name
1	Islamic culture	Islamic culture	Islamic culture 1&2	Islamic culture	Islamic Civilization			Introduction to Religion I+2
2	National culture			-				
3	English Language 101	English Language (101)	English Language (1)	English Language (101)	English Language 1	English for Health Sciences		General English Language
4	Arabic Language 101	Arabic Language	Arabic Language (1)	Arabic Language (101)	Arabic Language			
5	Fundamental of Nursing					Foundation Concepts in Medical Sciences	Clinical Skills	
6	Computer Skills	Computer Skills	Computer Skills	Computer and Internet	Introduction to Computer Science	Innovation and Technology in Health Sciences	Healthcare Imaging & Information Systems; Clinical Science & Healthcare Informatics	Computer
7	Community Medicine	Introduction to Community Medicine and Environment	Community Medicine 1	Doctor and Community	Community Medicine	History Medicine	Science, Medicine & Society	
8	Communication Skills	Communication Skills			Clinical and Communication Skills	Foundations of Clinical Medicine I (CC)	Patients, Doctors & Healthcare	
9	Medical Ethics	Medical Ethics	Medical Ethics	Medical Ethics	Medical Ethics	Principles of Bioethics (CC)	GP & Professionalism	Medical Ethics
10		Critical Thinking	Motherhood and Childhood	Medical Physics	Biology		Inorganic Chemistry	Cell and Molecules
				Man and his Environment			Organic Chemistry	
							Multimedia Studies	
—	—	—	—	—	—		—	—
1	Arabic Language 102		Arabic Language 2	Arabic Language 2	Apptied Studies in Arabic Language			
2	English Language 102	English Language (102)	English Language 2	English Language 2	English Language 2	English for Health Sciences		
3	Medical Terminology	Medical English				English for Health Sciences +	Patients, Doctors & Healthcare	Medical Terminology 1

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						Foundation Concepts in Medical Sciences		
4	Arab and Israeli conflict							
5	Introduction to Cell Biology and Histology	Introduction to Cell Biology and Histology		Cell Biology	Cell Biology and Tissues	Skin and Subcutaneous Tissue	Basic Principles of Cell Biology; Basic Tissues & Early Development	Tissue, Development & Function
6	Introduction to Anatomy & Embryology	Introduction to Anatomy & Introduction to Embryology		Growth, development & aging	Gen Anatomy	Abdomen, Pelvis & Perineum: Structure & Function + Head & Neck: Structure & Function + Thorax: Structure & Function + Limbs and Spine: Structure and Function	Basic Tissues & Early Development; Musculoskeletal Biology	Anatomy of limbs
7	Introduction to Physiology	Introduction to Physiology			Gen Physiology	Enzymes and Metabolism	Cell–Cell Signalling	Physiology in the System's
8	Biochemistry (1)	Introduction to Biochemistry		Biochemistry	Gen Biochemistry		Molecules in Medicine 2; Applied & Physical Chemistry	Biochemistry
9	Introduction to Microbiology			Microbiology 1	gen Microbiology	General Microbiology	Principles of Infection & its Treatment	Microbiology & Virology
10	Introduction to Pathology	Introduction to Pathology	Pathology	Pathology 1 + 2	Gen Pathology	General Pathology	Disease Mechanisms & Pharmacological Principles	Pathology
11	Introduction to Pharmacology	Pharmacology		Pharmacology 1 + 2	gen Pharmacology	Principles of Pharmacology and Therapeutics	Disease Mechanisms & Pharmacological Principles; Therapeutics	Pharmacology1+2
12	Medical Parasitology						Medical Zoology	Parasitology
13	Immunology				Immunology	Hematopoietic and Immune System	Oncology & Immunopathology	Immunology
14		Skill of Hully Quran and recitation and Tajweed	Man and Environment		Organ Chemistry			General Persian Language
15		Psycho-Social Science			Chemistry			Psychology
16					Military Science			
17					Computing Programming in Diff. Lang			
18								

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Level 2								
No	Course Name	Course Name	Course Name	Course Name	Course Name		Course Name	Course Name
1	Molecular Biology & Genetics			Microbiology 1, Genetics	Molecular Genetics	Genetics and Molecular Biology	Basic Principles of Genetics; Genetics, Perinatal and Paediatric Diseases	Medical Genetic
2	Biochemistry 2	Nutrition Biochemistry				Enzymes and Metabolism		
3	Musculoskeletal System	Musculoskeletal System	Musculoskeletal and Gastrointestinal system	Musculoskeletal System Digestive system	Musculoskeletal System	Musculoskeletal System	Musculoskeletal Biology; Locomotor Biology	
4	Gastrointestinal system	Gastrointestinal system		Internet in Medicine	Gastrointestinal system	Digestion and Nutrition	Gastrointestinal Tract & Liver Biology; GI/Hepatobiliary Diseases	Gastrointestinal System
5				Primary Health Care				Persian Language
6				Microbiology 1, Genetics				
7								
8								
—	—	—	—	—	—		—	—
1	Respiratory System	Cardio respiratory system	Circulation and Respiratory system	Respiratory Diseases Cardiopulmonary System	Respiratory System	Respiratory System	Respiratory Biology; Respiratory Diseases	Respiratory System
2	Cardiovascular System			Nutrition & Food Chemistry	Cardiovascular System	Cardiovascular System	Cardiac Biology; Cardiovascular and Renal Diseases; Vascular Biology	Cardiovascular System
3	Nutrition	Nitration		Biostatistics	Human Nutrition and Health	Digestion and Nutrition	Food Diet and Health	Nutrition
4	Medical Biostatistics	Biostatistics	Community Medicine 2	Respiratory Diseases	Biostatistics	Fundamentals of Epidemiology and Biostatistics 1+2	Science, Medicine & Society; Epidemiology & Public Health	Biostatistics
5			Field Project				Introduction to Physical and Forensic Anthropology	Information Technology
6								Physical Training1
7								Devine Ethics

Level 3								
No	Course Name	Course Name	Course Name	Course Name	Course Name		Course Name	Course Name
1	Genito-Urinary System	Urogenital System	Urinary System	Genito-Urinary System	Genito-Urinary System	Renal and Urinary System	Renal Biology; Cardiovascular and Renal Diseases	Urinary System & Reproductive System
2	Health Management	Leadership Skills Development	Community Medicine 2	Health Management	Health Administration		Healthcare Systems	
3	Research Methodology	Research Methodology		Research Methodology	Research Methodology	Research Methods I+2		Research Methods
4	Endocrine System	Endocrine and metabolism	Endocrine System	Endocrine System	Endocrine System	Endocrine System	Endocrine Biology; Endocrine Diseases	Endocrine Systems
5	Behavior Science				Behavior psychiatry	Behavioral Medicine		

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						+ Mind and Behavior		
6							Understanding Disability for Healthcare Students	
7							Adaptation to hypoxia: high altitude and lessons for disease	Special Senses
--	--	--	--	--	--		--	--
1	Central nervous System	Central nervous System	nervous System	Central nervous System	Neuroscience 1 + 2	Neurosciences	Neurosciences; Central Nervous Systems Diseases	Nervous System
2	Haemato-lymphatic System	Haemato and Blood Diseases	Blood diseases, immunity and lymphatic system	Blood-lymphatic System	Haemato-lymphatic System	Hematopoietic and Immune System	Haematology/Immunosuppression	
3	Epidemiology and public Health	Primary Health Care and Family Medicine 1, 2, 3, 4	Occupational Health	Epidemiology	Introduction to public Health	Fundamentals of Epidemiology and Biostatistics 1+ 2	Public Health Medicine, Epidemiology & International Health	Principles of Epidemiology & Principles of Health Services
4		Principles Skills		Special Sense (Anatomy of Head and Neck)			Control of Vascular Resistance	Anatomy of Head and Neck
5			Field Project				Rare Genetic Disorders	Medical Terminology II
6					Family medicine and Primary Health Care			Physical Training II
7								Devine Texts
8		General Surgery						Persian Language (Persian Medical Terminology)
9								Advance Pathology 1
10								

Level 4								
No	Course Name	Course Name	Course Name	Course Name	Course Name		Course Name	Course Name
1	Obstetrics & Gynecology I	Obstetrics & Gynecology	Obstetrics & Gynecology I	Obstetrics & Gynecology I	Obstetrics & Gynecology I	Obstetrics and Gynecology	Obstetrics & Gynaecology	General Obstetrics and Gynecology
3	Forensic & Clinical Toxicology	Forensic Medicine	Forensic Medicine	Pediatrics 1	Forensic & Clinical Toxicology		Forensic & Legal Medicine; Therapeutics	Forensic Medicine & Toxicology
2	Pediatrics 1	Pediatric	Pediatric 1	Forensic Medicine & Toxicology	Pediatrics 1	Pediatrics I	Paediatrics	Pediatrics Diseases 1 + Fundamentals of Clinical Pediatrics
4								Clinical Immunology I
5								Clinical Immunology II

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6								Clinical Epidemiology
7								
---	---	---	---	---	---	---	---	---
1	Internal Medicine 1	Internal Medicine	Internal Medicine 1	Internal Medicine 1	Internal Medicine 1	Internal Medicine I	Medicine I	Internal Medicine
2	General Surgery 1	General Surgery	General Surgery 1	General Surgery 1	General Surgery 1	Surgery I	Surgery	General Surgery + Fundamentals of Clinical Surgery
3	Emergency medicine		Introduction to medical studies and emergency		Frist Aid and Emergency	Emergency medicine	Clinical Skills	Emergency Medicine
4			Field Project	Tropical Diseases				Advance Pathology 2
5				Urology				Medical Practice
6								Basic Clinical Skills
7								

Level 5

No	Course Name	Course Name	Course Name	Course Name	Course Name		Course Name	Course Name
1	Otorhinolaryngology (ENT)	Otorhinolaryngology (ENT)	Otorhinolaryngology (ENT)	Otorhinolaryngology (ENT) Psychiatry Diseases	Otorhinolaryngology(ENT)	Surgery II	Otolaryngology	Otolaryngology
2	Psychiatry	Neurology and Psychiatry	Psychiatry	Psychiatry Diseases	Psychiatry	Family Medicine/Psychiatry	Psychiatry	Psychiatry + Fundamentals of Clinical Psychiatry
3	Diagnostic Radiology		Radiology	Radiology and Nuclear Medicine	Diagnostic Radiology		Radiology & Diagnostic Imaging	Radiology
4	Ophthalmology	Ophthalmology	Ophthalmology	Ophthalmology	Ophthalmology	Surgery II	Ophthalmology	Ophthalmology
5		Community Medicine					Medicine Elective	Infectious Diseases + Fundamentals of Infectious Disease
6								Neurologic Diseases + Fundamentals of Clinical Neurology
7								
---	---	---	---	---	---	---	---	---
1	Neurosurgery			Neurology	Neurosurgery	Neurosciences		Neurosurgery
2	Dermatology	Dermatology	Dermatology	Dermatology	Dermatology	Family Medicine (Incl. Dermatology)		Dermatology
3	Orthopedics		Orthopedics	Orthopedics	Orthopedics	Surgery II	Basic Principles of Trauma	Orthopedics

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4	Anesthesia			Anesthesia and Primary Care	Anesthesia	Surgery I		Anesthesiology
5			Field Project	Cardiology (Medicine)			Stem Cells in Medicine	Urology
6			Urology	Neurology Diseses				
7								
	Level 6							
No	**Course Name**	**Course Name**	**Course Name**	**Course Name**	**Course Name**		**Course Name**	Course Name
1	Internal Medicine II	Medicine (Bachelor)	Internal Medicine 2	Internal Medicine II + III	Internal Medicine II	Medicine II	Medicine II	
2	General Surgery II	General Surgery (Bachelor)	General Surgery 2	General Surgery II + III	General Surgery II	Surgery II	Surgery	
3	Obstetrics & gynecology II	Gynecology & Obstetrics (Bachelor)	Obstetrics & gynecology 2	Obstetrics & gynecology II + III	Obstetrics & gynecology II	Obstetrics and Gynecology	Obstetrics & Gynecology	
4			Family medicine				Clinical Elective A	Family Health
5								Health Training
6								Persian Medicine
—	—	—	—	—	—		—	—
1	Pediatrics II	Pediatrics (Bachelor)	Pediatrics 2	Pediatrics II + III	Pediatrics II	Pediatrics II	Paediatrics	Pediatrics Diseases 2
2	Graduation Research	Field Training 1,2,3	Field Project 3+4	Field Research		Research Project	Professional Completion	Thesis
3					Elective			

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Annex-16, Comparison of Program Courses and Similar Programs Courses

#	21 SEPTEMBER University					University of Sciences and Technology					Hadramout University					Taiz University					Jordan University of Science and Technology					Mohammed Bin Rashid university of medicine and health sciences					DUBLIN UNIVERSITY-IRELAND-UK					Tehran University of Medical Sciences				
	Course	Course Hours				Course	Course Hours				Course	Course Hours				Course	Course Hours				Course	Course Hours				Course	Course Hours				Course	Course Hours				Course	Course Hours			
		CH	L	P	T		CH	L	P	T		CH	L	P	T		CH	L	P	T		CH	L	P	T		CH	L	P	T		CH	L	P	T		CH	L	P	T
1	Islamic culture	2	2	0	0	Islamic culture	4	4			Islamic culture 1&2	4	4	0	0	Islamic culture	2	2	0	0	Islamic Civilization	3	3	0	0											Introduction to Religion 1+2	4	4		
2	National culture	2	2	0	0											-																						
3	English Language 1	2	2	0	0	English Language (101)	4		8		English Language (1)	2	2	0	0	English Language (101)	2	2	0	0	English Language 1	3	3	0	0	English for Health Sciences	2								General English Language	-			
4	Arabic Language 1	2	2	0	0	Arabic Language	4	2	4		Arabic Language (1)	2	2	0	0	Arabic Language (101)	2	2	0	0	Arabic Language	3	3																
5	Fundamental of Nursing	3	2	2	0																						Foundation Concepts in Medical Sciences	4				Clinical Skills	5								
6	Computer Skills	3	2	2	0	Computer Skills	3		6		Computer Skills	2	1	1	0	Computer and Internet	2	1	2	0	Introduction to Computer Science	3	3			Innovation and Technology in Health Sciences	2				Healthcare Imaging & Information Systems; Clinical Science & Healthcare Informatics	5 + 5				Computer	1	1		
7	Community Medicine	3	3	0	0	Introduction to Community Medicine and Environment	3	2	2		Community Medicine 1	4	4	0	0	Doctor and Community	2	2	0	0	Community Medicine	9	0	0	8	History Medicine	2				Science, Medicine & Society	2.5								
8	Communication Skills	2	2	0	0	Communication Skills	1	1													Clinical and Communication Skills	9	4	9	2	Foundations of Clinical Medicine I (CC)	2				Patients, Doctors & Healthcare	2.5								
9	Medical Ethics	2	2	0	0	Medical Ethics	1	1			Medical Ethics	2	2	0	0	Medical Ethics	1	1	0	0	Medical Ethics	1	1	0	0	Principles of Bioethics (CC)	2				GP & Professionalism	2.5				Medical Ethics	2	2		
10						Critical Thinking	1	1			Motherhood and Childhood	11	6	5	0	Introduction to medical studies	2	2	0	0	Biology	4	3	3	0								Inorganic Chemistry	5				Cell and Molecules	3.75	3	0.75	

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11																													Organic Chemistry	5												
12																													Multimedia Studies	5												
13	Arabic Language 2	2	2	0						Arabic Language 2	2	2	0	0	Arabic Language 2	2	2	0	0	Applied Studies in Arabic Language	1	0	3	0																				
14	English Language 2	2	2	0		English Language (102)	4		8		English Language 2	2	2	0	0	English Language 2	2	2	0	0	English Language 2	3	3	0	0	English for Health Sciences	2																	
15	Medical Terminology	2	2	0		Medical English	2	2																			English for Health Sciences + Foundation Concepts in Medical Sciences	2				Patients, Doctors & Healthcare	2.5				Medical Terminology 1	3	3							
16	Arab and Israeli conflict	2	2	0																																							
17	Introduction to Cell Biology and Histology	3	2	2		Introduction to Cell Biology and Histology	3	2	2						Cell Biology	3	2	2	0	Cell Biology and Tissues	3	2	3		Skin and Subcutaneous Tissue	2				Basic Principles of Cell Biology; Basic Tissues & Early Development	5+2.5				Tissue, Development & Function	2.5	2.5	0.25						
18	Introduction to Anatomy & Embryology	5	4	2		Introduction to Anatomy & Introduction to Embryology	6	5	2						Growth, development & aging	3	3	0	0	Gen Anatomy	3	2	3	0	Abdomen, Pelvis & Perineum: Structure & Function + Head & Neck: Structure & Function + Thorax: Structure & Function + Limbs and Spine: Structure and Function	4+2+3+4				Basic Tissues & Early Development; Musculoskeletal Biology	2.5+2.5				Anatomy of limbs	3	1.5	1.5						
19	Introduction to Physiology	3	3	0		Introduction to Physiology	3	3			Man and his Environment	4	4	0	0						Gen Physiology	3	3	0	0	Enzymes and Metabolism	2				Cell–Cell Signalling	5				Physiology in the System's	13.4	13.4							
20	Biochemistry (1)	3	2	2		Introduction to Biochemistry	3	2	2						Biochemistry	3	2	2	0	Gen Biochemistry	3	3	0	0								Molecules in Medicine 2; Applied & Physical Chemistry	5+5				Biochemistry	2	1.5	0.5						

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21	Introduction to Microbiology	3	2	2												Microbiology 1	3	2	2	0	gen Microbiology	3	2	3	0	General Microbiology	3				Principles of Infection & its Treatment	5				Microbiology & Virology	5	4	1	
22	Introduction to Pathology	3	2	2	0	Introduction to Pathology	8	6	2		Pathology	10	5	5	0	Pathology 1 + 2	6	4	4	0	Gen Pathology	3	2	3	0	General Pathology	3				Disease Mechanisms & Pharmacological Principles	2.5				Pathology	6	5	1	
23	Introduction to Pharmacology	3	2	2	0	Pharmacology	4	3.5	0.5							Pharmacology 1 + 2	4	4	1	0	gen Pharmacology	3	3	0	0	Principles of Pharmacology and Therapeutics	3				Disease Mechanisms & Pharmacological Principles ; Therapeutics	2.5+2.5				Pharmacology1+2	5	4	1	
24	Medical Parasitology	3	2	2	0																						Medical Zoology	5				Parasitology	4	3	1	
25	Immunology	3	2	2	0																Immunology	3	3	0	0	Hematopoietic and Immune System	4				Oncology & Immunopathology	5				Immunology	3	2.5	0.5	
26						Skill of Hully Quran and recitation and Tajweed	1		2		Man and Environment	8	5	3							Organ Chemistry	3	3	0	0											General Persian Language	-				
27						Psycho-Social Science	1	1													Chemistry	3	3	0	0											Psychology	2	2			
28																					Military Science	3	3	0	0															
29																					Computing Programming in Dif Lang	3	2	3	0															
30	Molecular Biology & Genetics	2	2	0	0											Microbiology 1, Genetics	5	4	2	0	Molecular Genetics	4	3	3	0	Genetics and Molecular Biology	3				Basic Principles of Genetics; Genetics, Perinatal and Paediatric Diseases	5+5				Medical Genetic	2	2		
31	Biochemistry 2	3	2	2	0	Nutrition Biochemistry	2	2																			Enzymes and Metabolism	2												

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32	Musculos keletal System	8	6	4	0	Musculos keletal System	7	5	2		Musculos keletal and Gastroint estinal system	12	7	5	0	Musculos keletal System	6	4	4	0	Musculos keletal System	6	4	6	0	Musculoskeletal System	3				Musculos keletal Biology; Locomoto r Biology	2 5 + 5									
33	Gastroint estinal system	13	10	6	0	Gastroint estinal system	14	12	2							Digestive system	7	5	4	0	Gastroint estinal system	6	4	6	0	Digestion and Nutrition	2				Gastroint estinal Tract & Liver Biology; GI/Hepat obiliary Diseases	5 + 5				Gastroin testinal System	2.75	2	0.75	
34																Internet in Medicine	2	2	0	0												Persian Languag e	3	3		
35																Primary Health Care	4	2	4	0																				
36	Respirato ry System	8	6	4	0	Cardio respirator y system	14	12	2		Circulatio n and Respirato ry system	11	6	5		Respirato ry Diseases	4	1	0	9	Respirato ry System	6	4	6	0	Respiratory System	3				Respirato ry Biology; Respirato ry Diseases	5 + 5				Respirat ory System	1.75	1.5	0.25	
37	Cardiovas cular System	8	6	4	0	Nitration	2	1	1							Cardiopul monary System	10	8	4	0	Cardiovas cular System	6	4	6	0	Cardiovascular System	4				Cardiac Biology; Cardiovas cular and Renal Diseases; Vascular Biology	5 + 2.5 + 5				Cardiova scular System	4.25	3.25	1	
38	Nutrition	3	2	2	0											Nutrition & Food Chemistr y	2	2	0	0	Human Nutrition and Health	3	3	0	0	Digestion and Nutrition	2				Food Diet and Health	5				Nutrition	2	2		
39	Medical Biostatisti cs	2	2	0	0	Biostatisti cs	4	2	1	1	Communi ty Medicine 2	4	4	0	0	Biostatisti cs	2	2	0	0	Biostatisti cs	1	1	0	0	Fundamentals of Epidemiology and Biostatistics 1+2	2				Science, Medicine & Society; Epidemio logy & Public Health	2.5 + 5				Biostatis tics	1	1		
40											Field Project	3	0	3	0																Introducti on to Physical and Forensic Anthropol ogy	5				Informat ion Technol ogy	2	2		
41																																		Physical Training 1	1	1		

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42																																									
43	Genito-Urinary System	8	6	4	0	Urogenital System	10	8	2		Urinary System	5	3	2	0	Genito-Urinary System	9	7	4	0	Genito-Urinary System	8	6	6	0	Renal and Urinary System	3				Renal Biology; Cardiovascular and Renal Diseases	5+2.5				Devine Ethics	2	2		
44	Health Management	2	2	0	0	Leadership Skills Development	1	1			Community Medicine 2					Health Management	1	1	0	0	Health Administration	1	1	0	0						Healthcare Systems	5				Urinary System & Reproductive System	3.5	3	0.5	
45	Research Methodology	2	2	0	0	Research Methodology	2	1	1							Research Methodology	2	2	0	0	Research Methodology	1	1	0	0	Research Methods I+2	4									Research Methods	1	1		
46	Endocrine System	8	6	4	0	Endocrine and metabolism	8	7	1		Endocrine System	5	3	2	0	Endocrine System	5	4	2	0	Endocrine System	6	5	3	0	Endocrine System	4				Endocrine Biology; Endocrine Diseases	5+5				Endocrine Systems	1.75	1.5	0.25	
47	Behavior Science	2	2	0	0																Behavior psychiatry	3	3	0	0	Behavioral Medicine + Mind and Behavior	8+2													
48																										Human Reproduction	3				Understanding Disability for Healthcare Students	5								
49																																Adaptation to hypoxia: high altitude and lessons for disease	5				Special Senses	1.25	1	0.25	
50	Central nervous System	10	8	4	0	Central nervous System	10	9	1		nervous System	8	5	3	0	Central nervous System	6	5	3	0	Neuroscience 1 + 2	8	6	6	0	Neurosciences	4				Neurosciences; Central Nervous Systems Diseases	5+5				Nervous System	3.25	2.75	0.5	
51	Haemato-lymphatic System	5	4	2	0	Haemato and Blood Diseases	4	3	1		Blood diseases, immunity and lymphatic system	9	5	4		Blood-lymphatic System	5	4	2	0	Haemato-lymphatic System	6	4	6	0	Hematopoietic and Immune System	4				Haematology/Immunosuppression	5								
52	Epidemiology and public Health	4	3	2	0	Primary Health Care and Family Medicine 1, 2, 3, 4	12				Occupational Health	4	3	1		Epidemiology	2	2	0	0	Introduction to public Health	3	3	0	0	Fundamentals of Epidemiology and Biostatistics 1+2	2				Public Health Medicine, Epidemiology & International Health	5				Principles of Epidemiology & Principles of Health Services	4	4		

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53						Principles Skills	3		3							Special Sense (Anatomy of Head and Neck)	3	2	2	0											Control of Vascular Resistance	5				Anatomy of Head and Neck	1.5	1	0 5	
54											Field Project	3	0	3	0																Rare Genetic Disorders	5				Medical Terminology II	3	3		
55																					Family medicine and Primary Health Care	4.5	0	0	4											Physical Training II	1	1		
56																																				Devine Texts	2	2		
57						General Surgery																														Persian Language (Persian Medical Terminology)	3	3		
58																																				Advance Pathology 1	2	2		
59	Obstetrics & Gynecology I	8	4	0	12	Obstetrics & Gynecology	12	8	4		Obstetrics & Gynecology 1	8	4	4	0	Obstetrics & Gynecology I	4	1	0	9	Obstetrics & Gynecology I	9	0	0	8	Obstetrics and Gynecology	8				Obstetrics & Gynaecology	5				General Obstetrics and Gynecology	10	4	6	
60	Pediatrics 1	8	4	0	12	Pediatric	12	8	4		Pediatric 1	8	4	4	0	Pediatrics 1	4	1	0	9	Pediatrics 1	9	0	0	10	Pediatrics I+II	12				Paediatrics	5				Pediatrics Diseases I + Fundamentals of Clinical Pediatrics	13	5	8	
61	Forensic & Clinical Toxicology	3	2	0	3	Forensic Medicine	5	4	1		Forensic Medicine	4	2	2	0	Forensic Medicine & Toxicology	3	2	0	3	Forensic & Clinical Toxicology	2.25	0	0	2						Forensic & Legal Medicine; Therapeutics	5+2.5				Forensic Medicine & Toxicology	2	2		
62																																				Clinical Immunology I	1	1		
63																																				Clinical Immunology II	1	1		
64																																				Clinical Epidemiology	2	2		

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65	Internal Medicine 1	13	8	0	15	Internal Medicine	15	12	3		Internal Medicine 1	8	4	4	0	Internal Medicine 1	5	1	0	12	Internal Medicine 1	9	0	0	10	Internal Medicine I,II	15				Medicine I	10				Internal Medicine	12		12	
66	General Surgery 1	13	8	0	15	General Surgery	15	12	3		General Surgery 1	8	4	4	0	General Surgery 1	5	1	0	12	General Surgery 1	9	0	0	10	Surgery I	8				Surgery	10				General Surgery + Fundamentals of Clinical Surgery	12	6	6	
67	Emergency medicine	3	2	0	3						Introduction to medical studies and emergency	11	6	5	0						Frist Aid and Emergency	3	3	0	0	Emergency medicine	4				Clinical Skills	5				Emergency Medicine	1.5		15	
68											Field Project																									Advance Pathology 2	2.7	2	0.7	
69																																				Medical Practice	1.5	0.5	1	
70																																				Basic Clinical Skills	4	2	2	
71	Otorhinolaryngology (ENT)	3	2	0	3	Otorhinolaryngology (ENT)	5	3	2		Otorhinolaryngology (ENT)	4	2	2	0	Otorhinolaryngology (ENT)	4	1	0	9	Otorhinolaryngology (ENT)	2.25	0	0	2	Surgery II	2				Otolaryngology	5				Otolaryngology	3		3	
72	Psychiatry	3	2	0	3	Neurology and Psychiatry	5	3	2		Psychiatry	4	2	2	0	Psychiatry Diseases	4	1	0	9	Psychiatry	4.5	0	0	4	Family Medicine/Psychiatry	8				Psychiatry	10				Psychiatry + Fundamentals of Clinical Psychiatry	5	2	3	
73	Diagnostic Radiology	3	2	0	3						Radiology	4	2	2	0	Radiology and Nuclear Medicine	4	1	0	9	Diagnostic Radiology	2.25	0	0	2						Radiology & Diagnostic Imaging	5				Radiology	3		3	
74	Ophthalmology	3	2	0	3	Ophthalmology	5	3	2		Ophthalmology	4	2	2	0	Ophthalmology	4	1	0	9	Ophthalmology	2.25	0	0	2	Surgery II	2				Ophthalmology	5				Ophthalmology	1.5		1.5	
75						Community Medicine	5	1	4																							Medicine Elective	10				Infectious Diseases + Fundamentals of Infectious Disease	6	3	3	
76																																				Neurologic Diseases + Fundamentals of Clinical Neurology	5	2	3	

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77	Neurosurgery	3	2	0	3										Neurology	3	2	2	0	Neurosurgery	2.25	0	0	2	Neurosciences	4					10				Neurosurgery	1	1		
78	Dermatology	3	2	0	3	Dermatology	5	3	2		Dermatology	4	2	2	0	Dermatology	4	1	0	9	Dermatology	2.25	0	0	2	Family Medicine (Incl. Dermatology)	8					5				Dermatology	3		3	
79	Orthopedics	3	2	0	3						Orthopedics	4	2	2	0	Orthopedics	4	1	0	9	Orthopedics	2.25	0	0	2	Surgery II	2				Basic Principles of Trauma	5				Orthopedics	5	2	3	
80	Anesthesia	3	2	0	3										Anesthesia and Intensive Care	4	1	0	9	Anesthesia	2.25	0	0	2	Surgery II	2					5				Anesthesiology	15		15	
81											Field Project																			Stem Cells in Medicine	5				Urology	3	1	2	
82											Urology	4	1	3																										
83	Internal Medicine II	8	4	0	12	Medicine (Bachelor)	10	5	5		Internal Medicine 2	11	5	6	0	Internal Medicine II + III	10	2	0	24	Internal Medicine II	9	0	0	8	Medicine III	12				Medicine II	10								
84	General Surgery II	8	4	0	12	General Surgery (Bachelor)	10	5	5		General Surgery 2	11	5	6	0	General Surgery II + III	10	2	0	24	General Surgery II	9	0	0	8	Surgery III	12				Surgery	10								
85	Obstetrics & gynecology II	6	4	0	6	Gynecology & Obstetrics (Bachelor)	8	4	4		Obstetrics & gynecology 2	9	5	4	0	Obstetrics & gynecology II + III	8	2	0	18	Obstetrics & gynecology II	9	0	0	8	Obstetrics and Gynecology	4				Obstetrics & Gynaecology	5								
86											Family medicine	4	2	2	0																Clinical Elective A	5				Family Health	2	2		
87																																						Health Training	3		3	
88																																						Persian Medicine	2	2		
89	Pediatrics II	6	4	0	6	Pediatrics (Bachelor)	8	4	4		Pediatrics 2	9	5	4	0	Pediatrics II + III	8	2	0	18	Pediatrics II	9	0	0	8	Pediatrics II	4				Paediatrics	5				Pediatrics Diseases 2	3	1	2	
90	Graduation Research	4	0	12	0	Field Training 1,2,3	12	3	9		Field Project 3+4	6	2	4	0	Field Research	4	2	6	0						Research Project	4				Professional Completion	20				Thesis	6		6	
91																					Elective	9	0	0	8	Selective and electives	10												
92																																									

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Annex- 17, Matrix of Mapping Program PILO's with Courses

I = Introduced, P = Practiced, M/A = Mastered/Advance

#	Level	Course Code	Courses	Credit hours	Lectures	Practical	Tutorial	Program ILOs												
								Knowledge and Understanding				Intellectual Skills			Professional and Practical Skills			Transferable Skills		
								A1	A2	A3	A4	B1	B2	B3	C1	C2	C3	D1	D2	D3
1	1	A21U10	Islamic culture	2	2	0	0												I	
2	1	A21U11	National culture	2	2	0	0												I	
3	1	A21U12	English Language 1	2	2	0	0											I		I
4	1	A21U13	Arabic Language 1	2	2	0	0											I		
5	1	A21U14	Computer Skills	3	2	2	0							I				I		I
6	1	A21P19	Community Medicine	3	3	0	0		I				I						I	
7	1	A21F12	Communication Skills	2	2	0	0											I		I
8	1	A21F13	Fundamental of Nursing	3	2	2	0	I				I			I				I	
9	1	A21F11	Medical Ethics	2	2	0	0											I		
10	1	A21U15	Arabic Language 2	2	2	0	0											I		I
11	1	A21U16	English Language 2	2	2	0	0											I		I
12	1	A21F10	Medical Terminology	2	2	0	0											I		I
13	1	A21U17	Arab and Israeli conflict	2	2	0	0												I	
14	1	A21P113	Introduction to Anatomy & Embryology	5	4	2	0	I	I			I	I							
15	1	A21P114	Introduction to Physiology	3	3	0	0	I	I			I	I		I				I	
16	1	A21P116	Introduction to Pathology	3	2	2	0	I	I			I	I							
17	1	A21P115	Biochemistry 1	3	2	2	0	I	I			I	I		I				I	
18	1	A21P117	Introduction to Cell Biology and Histology	3	2	2	0	I	I			I	I							

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19	1	A21P118	Introduction to Microbiology	3	2	2	0	I	I			I	I		I				I	
20	1	A21P119	Introduction to Pharmacology	3	2	2	0	I	I			I	I		I				I	
21	1	A21P120	Medical Parasitology	3	2	2	0	I	I			I	I		I				I	
22	1	A21P121	Immunology	3	2	2	0	I	I			I	I		I				I	
23	2	A21P30	Molecular Biology & Genetics	3	2	2	0	I	I			I	I		I				I	
24	2	A21P20	Biochemistry 2	3	2	2	0	I	I			I	I		I				I	I
25	2	A21P21	Musculo-skeletal System	8	6	4	0	M	M			M	M		P				I	I
26	2	A21P22	Gastro-intestinal system	13	10	6	0	M	M			M	M		P				I	I
27	2	A21P23	Respiratory System	8	6	4	0	M	M			M	M		P				I	I
28	2	A21P24	Cardiovascular System	8	6	4	0	M	M			M	M		P				I	I
29	2	A21P25	Nutrition	3	2	2	0	M	M			M	M		P				I	I
30	2	A21P26	Medical Biostatistics	2	2	0	0	M				M			P				I	I
31	3	A21P31	Health Management	2	2	0	0	M				M			P				I	I
32	3	A21P32	Genito-Urinary System	8	6	4	0	M	M			M	M		P				I	I
33	3	A21P33	Research Methodology	2	2	0	0				I			I			I		I	I
34	3	A21P34	Behavior Science	2	2	0	0	M	M	M		M	M		M	M		M	M	M
35	3	A21P35	Endocrine System	8	6	4	0	M	M			M	M		P				I	I
36	3	A21P36	Central nervous System	10	8	4	0	M	M			M	M		P				I	I
37	3	A21P37	Haemato-lymphatic System	5	4	2	0	M	M			M	M		P				I	I
38	3	A21P50	Public Health & Epidemiology	4	3	2	0	M				M			P				I	I
39	4	A21P40	Obstetrics & Gynecology I	8	4	0	12	M	M	M		M	M	M	P	P		I	I	I

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40	4	A21P41	Pediatrics 1	8	4	0	12	M	M	M		M	M	M	P	P		I	I	I
41	4	A21P42	Forensic & Clinical Toxicology	3	2	0	3		M	M		M	M		P	P			I	I
42	4	A21P43	Internal Medicine I	13	8	0	15	M	M	M		M	M	M	P	P	P	I	I	I
43	4	A21P44	General Surgery I	13	8	0	15	M	M	M		M	M	M	P	P	P	I	I	I
44	4	A21P59	Emergency medicine	3	2	0	3	M	M			M	M		P			I	I	
45	5	A21P51	Anesthesia	3	2	0	3	M	M			M	M		P			I	I	I
46	5	A21P52	Otorhino-laryngology (ENT)	3	2	0	3	M	M			M	M		P			I	I	I
47	5	A21P3	Psychiatry	3	2	0	3		A	A		A	A	A		P	P	I	I	
48	5	A21P54	Diagnostic Radiology	3	2	0	3	M	M			M	M		P			I	I	I
49	5	A21P55	Ophthalmology	3	2	0	3	M	M			M	M		P			I	I	I
50	5	A21P56	Neurosurgery	3	2	0	3	A	A	A		A	A	A	P	P	P	I	I	I
51	5	A21P57	Dermatology	3	2	0	3	M	M			M	M		P			I	I	I
52	5	A21P58	Orthopedics	3	2	0	3	M	M			M	M		P			I	I	
53	6	A21P60	Internal Medicine II	8	4	0	12	A	A	A		A	A	A	P	P	P	I	I	I
54	6	A21P61	General Surgery II	8	4	0	12	A	A	A		A	A	A	P	P	P	I	I	I
55	6	A21P62	Obstetrics & gynecology II	6	4	0	6	A	A	A		A	A	A	P	P	P	I	I	I
56	6	A21P63	Pediatrics II	6	4	0	6	A	A	A		A	A	A	P	P	P	I	I	I
57	6	A21P64	Graduation Research	4	0	12	0				A			A			P		I	I

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Program Intended Learning Outcomes (PILOs): Medicine and Surgery Program at 21 September University

Program Intended Learning Outcomes (PILOs):

A. KNOWLEDGE AND UNDERSTANDING

Upon successful completion of an undergraduate* Medicine and Surgery Program, *the graduates will be able to:

A1. Describe the general and basic sciences related to human body structure and functions with emphasis on normal and abnormal conditions.

A2. Identify the progress of human body through all stages of development, alteration of structure and function during these stages and indication for surgical or non-surgical intervention and the role of treatment in healing or curing the diseases.

A3. Explain the pathological and pathogenesis changes in various diseases, and their etiological triggers including genetic, developmental, infectious, metabolic, endocrinal, autoimmune, neoplastic, traumatic, degenerative and occupational factors.

A4. Recognize the local and international guidelines, ethics, disease management, prevention and other risk factors that affect community health.

B. COGNITIVE/INTELLECTUAL SKILLS

Upon successful completion of an undergraduate* Medicine and Surgery Program, *the graduates will be able to:

B1. Compare between normal and abnormal conditions and predict the appropriate treatment or intervention.

B2. Analyze and interpret the finding from history, clinical examination and investigations to propose a diagnosis and develop a shared management plan for common acute, chronic and urgent physical and mental health presentations.

B3. Explore to medical practice the principles, method and knowledge of population health and the improvement of health and healthcare.

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Program Intended Learning Outcomes (PILOs):

C. PRACTICAL AND PROFESSIONAL SKILLS:

Upon successful completion of an undergraduate* Medicine and Surgery Program, *the graduates will be able to:

C1. Perform complete clinical examination and precise investigations to reach the final diagnosis

C2. Prescribe appropriate drugs taking in mind the benefits, side effects, interactions, safety and availability.

C3. Carry out routine medical procedure and demonstrate the ability of using common medical tools required for diagnosis and management with highly qualified competency.

D. GENERAL / TRANSFERABLE SKILLS

Upon successful completion of an undergraduate* Medicine and Surgery Program, *the graduates will be able to:

D1. Communicate with professionals, patients, their families and the community through verbal, written and other non-verbal means.

D2. Work individually or in a team and develop lifelong learning using up to date technology that help in understanding the diseases and its control and prevention.

D3. Respect the different cultural beliefs, ethics, personalities, privacy and values for patients and community with a good behavior and follow the institutional and national roles of medical practice

Annex- 18 CVs for the Preparation Committee

Preparation Committee:

1. Prof. Mojahed Measar
2. Assoc. Prof. Sadeq Abdulmoghni.
3. Assoc. Prof. Salwa Al-Khomiri.
4. Assoc. Prof. Walied Al-Thahibi.
5. Prof. Noman Fairooz.

Program Coordinator:

1. Assoc. Prof. Salwa Al-Khomiri.
2. Assoc. Prof. Mohammed Al-Eriani.

Review by:

1. Assoc. Prof. Mohammed Al-Eriani.
2. Dr. Fares Mahdi

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