Ministry of Higher Education and
Scientific Research
Scientific Supervision and Evaluation
Authority

SUMER UNIVERSITY - COLLEGE OF MEDICINE

Quality Assurance and Academic

Medical Academic Program Description Form

2026-2025

Academic description of the College of Medicine

University of Sumer

College of Medicine

Scientific Department: General

Signature
Assist.prof . Sadiq lafta musa
Associate Dean for Scientific Affairs

The file has already been checked by:

Division of Quality Assurance and University Performance

Director of the Division of Quality Assurance and University Performance of the College of Medicine

Lect. Shaimaa Hameed Hassan

Date :2026

Signature



Approval of the Dean
Prof. Dr. Hatim abdalkareem Al-Shwilly

Academic Description Program for The college of Medicine

Introduction:

Sumer Medical College's curriculum consists of two primary stages:
Phase 1: First three years of study in basic medical sciences
Phase 2: Fourth to sixth years of study in clinical medical sciences
Despite the program's division into the aforementioned phases, the college, as a deanship and faculty, makes every effort to integrate both horizontal and vertical aspects as much as possible. This can be seen in the basic medical sciences' clinical orientation and relevance to the college's goals and mission. Furthermore, the two stages are intended to help achieve the necessary results that have been approved by the Iraqi Medical Association and the expert committee that released these results in 2020.In addition to being outcome-based, our educational program's assessment system is being developed to better evaluate graduates' achievement of outcomes and to be entirely outcome-based.
For the past eight years, we have gradually integrated the principles of outcome assessment into our assessment policy. **The following teaching techniques are employed in the educational activities that are used to deliver the curriculum contents:**
1. Large group instruction: which takes the form of lectures delivered in the main lecture halls and incorporates active learning techniques like brainstorming, and active student interaction.
2. Small group instruction: For the past ten years, this teaching strategy has been included in our curriculum. It is used and practiced in two ways. The first is central, where students are given two hours each week to engage in active learning by discussing well-crafted integrated case scenarios in small groups. The alternative approach is department-based, with each department allocating a minimum of 10 hours per semester to instruct students in problem-solving techniques.
3. Practical/lab training: This is especially used in the first basic medical sciences phase, where students receive instruction in various labs based on their courses.
4- Clinical training, although, the clinical training is started at the 3rd year of the study, but early clinical exposure is one of the changes that our college is working to activate. Currently can be demonstrated by adding medical terminology and foundation of medicine, in near future the plan to start clinical skills foundation course during the 1st 3 years of study to make the students explore the critical thinking and how the doctor think and behave as early as possible.

GENERAL DESCRIPTION OF THE FACULTY OF MEDICINE

1- Program Vision
To be a distinguished and pioneering academic institution in medical education, scientific research, and community service, preparing competent physicians capable of competing locally, regionally, and internationally.

2- Program Mission
The College of Medicine at the University of Sumer aims to prepare highly qualified physicians in both basic and clinical medical sciences, committed to humanistic and professional values, capable of providing comprehensive healthcare, engaging in scientific research, and serving the community through an inspiring academic environment and accredited educational programs.

3- Program Objectives
1. To graduate highly competent physicians who meet the community's healthcare needs. 2. To enhance scientific research in priority medical fields serving health development. 3. To strengthen the College's role in community service through awareness campaigns and health initiatives. 4. To develop curricula and educational programs in accordance with quality and accreditation standards. 5. To foster students' skills in communication, teamwork, and medical ethics. 6. To promote scientific collaboration with universities and research institutions inside and outside Iraq.

4- Program Accreditation
Applied for

5- Other external influences
Teaching Hospital, Library, Internet, Community, Medical Syndicate.

6. Program Structure				
Program Structure	**Number of Courses**	**Unit of study**	**Percentage**	**Reviews***
Table details are available for each branch in the Faculty of Medicine and include all the required				

- **Notes may include whether the course is basic or optional.**

7. Program Description			
Year/Level	**Course Code**	**Course Name**	**Credit Hours**
Table details are available for each branch in the Faculty of Medicine and include all the required			

8. Expected learning outcomes of the program

Knowledge

1. The student should be acquainted with the human body's systems and how each component works.
2. Beginning with the smallest component, the student should familiarize themselves with each part of the body and learn about its functions.
3. To use his research on bodily functions to differentiate between normal and abnormal states.
4. To come up with suitable ways to address unusual circumstances.

to be able to recognize the external factors that affect people's and society's health, prevent harm from them, and employ beneficial ones.

Skills

1. Be able to practically apply the theoretical study's findings when handling pathological cases.
2. The ability to diagnose diseases and study how the body's organs work using contemporary technology.

Being able to carry out research and scientific studies to address societal and individual issues

Values

1. Commitment to medical ethics in the practice of the profession and in accordance with the values of society.
2. A dedication to successfully attending seminars.
3. A dedication to upholding his colleagues' rights to take part in problem-solving scientific discussions.

Recognize the value of ongoing research and information renewal to stay up to date with scientific advancements.

9. Teaching and Learning Strategies

1. I am a man of the same age who uses legends in theoretical lectures.
2. The practical application of concepts learned in teaching hospitals and specialized labs.
3Seminars: Students are given a curriculum-related topic to present and discuss.
4. Reaching the best solution to scientific and medical issues by debating their merits in small groups.
For student activities, the e-learning platform (Class Room) combines in-person and online instruction.

10. Evaluation methods

1. Daily tests (both practical and theoretical).
2. Exams at the middle and end of the course.
3. Seminars every week.
4. scientific research in medicine.

11-Faculty

Faculty Members

Academic rank	Specialization		Special Requirements/Skills (if any)	Preparation of the teaching staff	
	general	special		staff	lecturer
Table details are available for each branch in the Faculty of Medicine and include all the required					

12. Professional Development

Orientation of new faculty members

Preparing seminars and introductory courses for new teachers with periodic meetings to introduce them to the work contexts
Daily guidance, continuous follow-up, and giving advice and guidance.

13- Professional development of faculty members

Continuous learning by searching for updates using the library and the Internet in addition to attending seminars
Discussions and specialized scientific seminars, as well as active attendance in teaching hospitals to refine the hallers.

14. Acceptance Criterion

Admission is centralized through the Ministry of Higher Education and Scientific Research depending on the student's grades in
The sixth is scientific after preparing the form for that electronically.

15- The most important sources of information about the program

The website of the university and the college in addition to the website of the Ministry of Higher Education and Scientific Research as well as
College Library and Central Library at the University.

16. Program Structure

Program structure for the first academic level

Article Code	Material Name	Credit Hours	
		theoretical	practical
Ana.101	Anatomy	60 hour	120 hours
Chem.102	Medical chemistry	90 hour	60 hours
Bio.103	Medical Biology	90 hour	60 hours
Phys.104	Medical Physics	60 hour	60 hours
Com.105	Computers	30 hour	60 hours
Democ.106	Human Rights	30 hours	-
Term.107	Medical Terminology &Foundation of medical	60 hours	-
Arab.108	Arabic	60 hours	-
Total unit :40		Total hours :480	Total hours :360

Program structure for the Second academic level

Article Code	Material Name	Credit Hours	
		theoretical	Practical
Ana 2.201	Anatomy	**90**	**60**
Hist202	Histology	60	60
Emb203	Embryology	30	-
Physo204	Physiology	120	90
Bioc205	Biochemistry	90	60
Arab2.206	Arabic	60	-
Comp2.207	Computer	30	60
Crime. Bath 208	Crimes of the Defunct Baath party	30	-
Total unit : 41		Total hours :420	Total hours :270

Program structure for the Third academic level

Article Code	Material Name	Credit Hours	
		theoretical	Practical
Mic .301	Medical Microbiology	90 hour	60 hours
Pha302	Pharmacology	90 hours	60 hours
Pat303	Pathology	120 hours	120 hours
com304	community medicine	30 hour	30 hours
med305	Internal Medicine	45 hour	60 hours
Sur306	Surgery	30 hour	-
Paras 307	Parasitology	2 hours	3 hours
Total unit : 44		Total hours :465	Total hours :390

Program structure for the Fourth academic level

Article Code	Material Name	Credit Hours	
		theoretical	Practical
Med4010	Internal Medicine	120 hours	120 hours
surg402	General surgery	96 hours	90 hours
Obgy403	Obstetrics	60 hours	90 hours
Behav404	Behavioral science	30 hours	-
Fmed405	Forensic medicine	60 hour	60 hours
Cmed406	community medicine	105 hours	120 hours
Ethic407	Medical ethics	30 hour	-
Ped408	Pediatrics	30 hour	60 hours
Total unit : 53		Total hours :531	Total hours :540

Program structure for the fifth academic level

Article Code	Material Name	Credit Hours	
		theoretical	Practical
SUR501	surgery	45 hour	45 hour
RAD502	Radiology	30 hour	30 hours
OPH503	Ophthalmology	30 hour	30 hours
ORT504	Orthopedics	30 hours	30 hours
ENT505	ENT	30 hour	30 hours
GYN506	Gynecology	60 hours	60
PSY507	Psychiatry	60 hour	30
PED508	Pediatrics	90 hours	-
DER509	Dermatology	30 hour	30
MED510	Medicine	75 hour	60
Total unit : 44		Total hours :450	Total hours :420

Program structure for the Sixth academic level

Article code	Material Name	Credit Hours	
		theoretical	practical
MED601	Internal medicine		360 hours
Ped 602	Pediatrics		360 hours
SURG603	Surgery		360 hours
OBGY604	Gynecology & Obstetrics		360 hours
Total unit : 44			Total hours :1320

Curriculum Skills Outline

Year/Level	Article Code	Material Name	Cognitive goals				Program Skills Objectives				Emotional and value goals				General and qualifying skills transferred (other skills related to employability and personal development)			
			A 1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4
The first	Ana.101	Anatomy	√	√	√													
	Chem.102	Medical chemistry	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	Bio.103	Medical Biology	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√
	Phys.104	Medical Physics	√	√	√	√	√	√			√	√	√	√	√	√		
	Com.105	Computers	√	√	√		√	√			√	√			√	√	√	√
	Democ.106	Human Rights	√	√	√		√	√	√		√	√			√	√		
	Term.107	Medical Terminology &Foundation of medical	√	√	√	√	√	√	√		√							
	Arab.108	Arabic	√	√	√	√	√	√	√		√	√						

Second	An2.201	Anatomy	√	√	√	√	√	√	√		√	√						
	Hist202	Histology	√	√	√	√	√	√	√		√	√						
	Emb203	Embryology	√	√	√	√	√	√	√		√	√						
	Physo204	Physiology	√	√	√	√	√								√	√	√	
	Bioc205	Biochemistry	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	Arab2.206	Arabic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	Comp2.207	Computer	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	Crime. Bath 208	Crimes of the Defunct Baath party	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Third	Mic .301	Medical Microbiology				√				√				√				√
	Pha302	Pharmacology	√	√	√	√	√	√	√		√							
	Pat303	Pathology																
	com304	community medicine	√	√	√			√	√	√	√	√	√	√				
	med305	Internal Medicine	√	√	√			√	√	√	√	√	√	√	√			
	Sur306	Surgery	√	√	√			√	√	√	√	√	√	√	√	√	√	√
	Paras 307	Parasitology	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Fourth	Med 4010	Internal Medicine	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	surg402	General surgery	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	Obgy 403	Obstetrics	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	Beha v404	Behavioral science	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	Fmed 405	Forensic medicine	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	Cmed 406	community medicine		√				√				√				√		√
	Ethic407	Medical ethics		√				√				√				√		√
	Ped408	Pediatrics		√				√				√				√		√

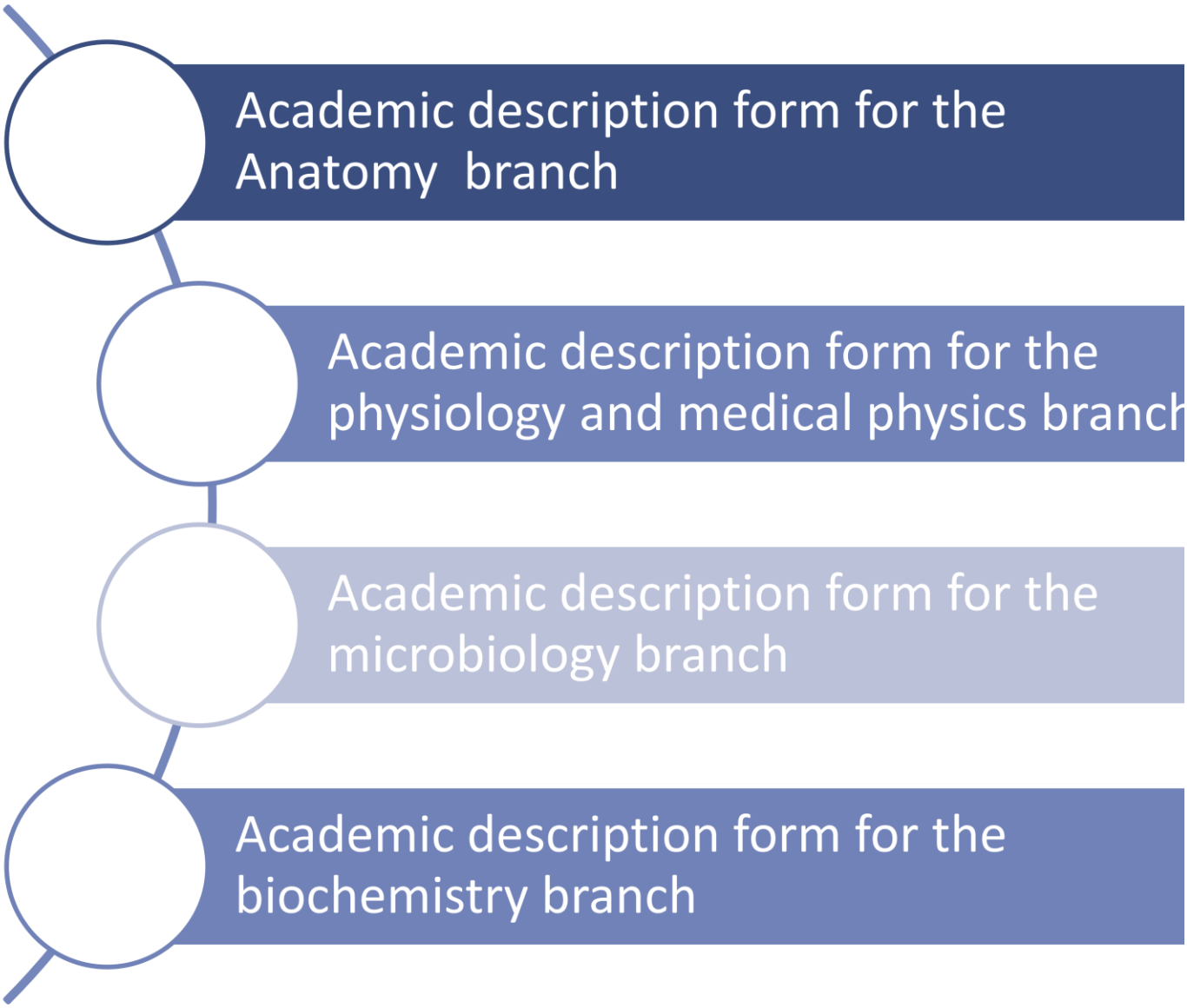
Fifth	SUR501	surgery		√				√				√				√		√
	RAD502	Radiology	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	OPH503	Ophthalmology	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	ORT504	Orthopedics	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	ENT505	ENT	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	GYN506	Gynecology		√				√				√				√		√
	PSY507	Psychiatry		√				√				√				√		√
	PED508	Pediatrics		√				√				√				√		√
	DER509	Dermatology		√				√				√				√		√
	MED510	Medicine		√				√				√				√		√

Sixth	ObGy 603	Obstetrics& Gynecology		√	√	√		√	√	√		√	√	√		√		√
	Ped 604	Pediatrics		√	√	√		√	√	√		√	√	√		√		√
	SURG601	Surgery		√	√	√		√	√	√		√	√	√		√		√
	MED600	Internal medicine		√	√	√		√	√	√		√	√	√		√		√

College of Medicine Course Description Form

1. Name of the institution	
College of Medicine/ university of sumer	
2. Course Code	
Each branch of the Faculty of Medicine has a description that includes a code for each course and subject.	
3. Semester/Year	
2025/2026	
4. Date of preparation of this description	
2026	
5. Number of credit hours (total) / number of units (total)	
Each branch of the Faculty of Medicine's description includes a thorough explanation of every topic.	
6. Course Objectives	
The objectives of each course are found in the description of the branches of the Faculty of Medicine	
7. Teaching and Learning Strategies	
Strategy	**1. Theoretical lectures that display different medical photographs using legend means (interactive whiteboard and data show).** **2.Two theoretical lectures, a lab, and a practical clinical application** **3. Seminars on a weekly basis** **4 Small group discussions to suggest solutions for societal and personal issues.** **5. Using the educational platform Electronic (Class Room), students can engage in both in-person and online learning.**

Academic description forms for the branches of College of Medicine/University of Sumer



Academic Description Form For The Anatomy Branch

To be able to determine whether the student has taken full advantage of the learning opportunities available, this course description summarizes the most significant educational traits and goals that the student is expected to accomplish. It has to be connected to the program description.

1. **Program Vision**
Following graduation, our students will be able to work in a multidisciplinary team in health sector to ensure the team's optimal functioning and effective patient outcomes.

2. **Program Mission**
Our college seeks to get the international accreditation, rise to the global level in terms of the outcome's quality, and graduate medical doctors who are highly effective in patient care, medical education research, and community service.

3. **Program Objectives**
✓ obtaining quality standards and medical accreditation in accordance with IGL, which is based on institutional quality standards for science. ✓ Graduating physicians with a bachelor's degree in general surgery and medicine will be well-equipped to perform patient examinations, diagnose illnesses, and administer treatment based on scientific and medical principles. They will also possess advanced clinical and professional knowledge, skills, and attitudes that they need to practice in an ethical manner in order to provide excellent health services and enable them to continue learning throughout their lives. ✓ After graduating, our students will be able to work in a multidisciplinary team in the health sector to guaranty the team's best performance and successful patient outcomes. ✓ preparing doctors to work in Iraq and abroad, pursue postgraduate education and

training in any area of medicine, and solve pressing issues in response to the demands of the health delivery system, society, and evolving conditions.

- ✓ Doctors who are highly skilled and knowledgeable in basic, clinical, behavioral, and biomedical scientific research.
- ✓ Motivating instructors, staff, and students to develop their technical abilities and make use of information and communication technology in order to disseminate knowledge, conduct scientific research, and develop curricula for educational initiatives.
- ✓ Putting in place a program for staff and faculty development.

4. **Program Accreditation**
Applied for

5. **Other external influences**
Teaching hospital, library, internet, community, doctors' syndicate.

6. Program Description

Year/Level	Article code	Course name	Credit hour	
			Theoretical	Practical
2026-2026- First	Ana101	Anatomy 1	60 hr	120 hr
2026-2026- second	Ana 201	Anatomy 2	90 hr	60 hr
2025-2026/ second	Histo202	Histology	60 hr	60 hr
2025-2026/Third	Emb203	Embryology	30 hr	-
2025-2026/Third	Pat303	Pathology	120 hr	120 hr
2025-2026/Fourth	Fmed405	Forensic medicine	60 hr	60 hr
2025-2026/Fifth	ORT 504	Orthopedics	30 hr	30 hr
2025-2026/Fifth	RAD502	Radiology	30 hr	30 hr
2025-2026/Fifth	ENT505	ENT	30 hr	30 hr

7- Expected learning outcomes of the program

Knowledge

1. Teaching and learning the superficial anatomical signs of the body that indicate the locations of bones and muscles Tendons, blood vessels, nerves, and other internal organs.
2. To link basic anatomy and embryology and tissues, in addition to the biology of cell function Manifestations of pathological conditions to arrive at the correct diagnosis.
3. To introduce the student to the diseases of the human body
4. The effects of the disease on every part of the body.
5. Differentiating between normal and abnormal conditions by studying General diseasesand identifying them clinically and histologically.
6. Learn about forensic science
7. How to deal with forensic cases received by health institutions.
8. How to write medical reports on the living and the dead.
9. How to write different death certificates and their importance.
10. Get acquainted with the rest of the relevant forensic sciences.
11. Encouraging students to engage in this rare specialty in the future

Skills

1. Identifying anatomical surface marks and their relationship to bones, tendons, muscles and internal structures in the body

Identifying and identifying anatomical structures such as muscles, nerves and blood vessels in plaster and plastic models, in addition to identifying them in radiology and MRI clips.

2. Identifying tissue structures and components by viewing it microscopically and how to prepare tissue slides.

Identifying the components of cells, their mechanism of action, and their divisions.

Avoid making mistakes when writing forensic medical reports.

3. Knowing how and safely sending forensic medical cases to the forensic medicine office when living and dead
4. Knowing the legal methods when receiving forensic medical cases from neighborhoods received to medical institutions.
5. The correct methods for diagnosing general diseases of humans

Ethics

1. Promoting the spirit of cooperation and teamwork to create a healthy environment suitable for humans.
2. Enhancing the ethical and humanitarian aspects that a doctor must possess
3. Highlighting the human and ethical aspects of the doctor in dealing with the patient.
4. .Commitment to medical ethics in practicing the profession and following the values of society.
5. .Commitment to actively attend the seminars
6. .Commitment to respect the rights of his colleagues to participate in scientific discussions to solve problems.
7. Appreciating the importance of continuous study and updating information to keep pace with scientific development.

9- Teaching and Learning Strategies

1. Delivering lectures in the form of PowerPoint, showing educational films, using plaster and plastic models, various anatomical sections of the brain, radiology and MRI films, and student participation during discussions during teaching in small groups in practical laboratories.
2. Students participate in interactive lectures in theoretical and practical lessons
3. Lectures with discussions.
4. White seaboard
5. Projector device
6. Students participate in small groups.
7. Interactive student participation during the lecture.
8. Using computers and the Internet to maintain communication with the advancement of scientific knowledge in human anatomy
9. Field visits to the Forensic Medicine Department to learn how to examine the living and autopsy the dead.
10. Solving scientific and medical problems by discussing their merits within small groups toreach the correct solution.
11. In-person and electronic blended learning via the e-learning platform (Classroom).

10. Evaluation methods

1 .Daily exams (theoretical and practical)

2 .Mid-course exams and end-of-course exams

3. Seminars and weekly seminars

4. Medical scientific activities.

11- Faculty

Faculty members

Academic rank	Specialization		Number of the teaching staff	
	General	Special	staff	Lecturer
1. Lec. dr. Miaad Jassim Muhammed	Medicine and General Surgery	Board of radiology specialist	√	None
2. Assis .Prof.dr.Ali Abd al-husain	Medicine and General Surgery	Board of Orthopedic surgery	√	None
3. Lec..dr.taban oan hameed	Medicine and General Surgery	Board of Otolaryngology - head and neck surgery	√	None
4. Assis .Prof. dr.Marwa jamal	Science	Histology	√	None
5. dr. lec Samih Abed Odhaib	Medicine and General Surgery	Board of Adult endocrinologist and diabetologist	None	√
6. Lec. Shaimaa hameed	Veterinary medicine	Anatomy &Histology	√	None
7.lec .ali abd alstar	Veterinary medicine	Anatomy &Histology		
8. Lec.Israa badi	Veterinary medicine	Anatomy &Histology	√	None
9. Assis.lec.Ali maged	Veterinary medicine	Anatomy &Histology	√	None
10. Assis .lec.muntadher maged	Arabic	Arabic	√	None
11. Assis.lec Hassan dakhl	Arabic	Arabic	√	None

Professional Development

Mentoring new faculty members

Introductory seminars and symposia for new faculty members with periodic meetings to introduce them to the work with daily guidance and continuous follow up along with advising and instructing them.

Professional development of faculty members

Continuous learning by searching for developments using the library and the Internet, in addition to attending seminars and specialized scientific symposia, along with active attendance in teaching hospitals to hone skills.

12. **Acceptance Criterion**
The admission is centralized through the Ministry of Higher Education and Scientific Research, based on the student's score in the twelfth grade (scientific branch) after preparing the online form for that.

13. The most important sources of information about the program

- University and college website, in addition to website of the Ministry of Higher Education and Scientific Research, along with college library and university's central library.
- Clinical Anatomy For Medical Students, by Richard S. Snell, Williams and Wilkins Cunningham's Manual Of Practical Anatomy, Three Volumes, By GJRomanes: Oxford.Medical.Publications.
- https://themdjourney.com/20-for-books-physiology-and-anatomy-medicalstudents/#The_Anatomy_Coloring_Book

For HISTOLOGY

- Human Anatomy and cell physiology by Mcgraw hill 17th ed.
  All human histology books and magazines

For EMBRYOLOGY

- Color Atlas of Embryology. Drews 1995.
  Developmental Biology. Gilbert 2003-2006
  For MEDICAL BIOLOGY
- Medical biology by SylviaMadar .

14. Program Development Plan

- Developing the scientific and administrative staff in the college through annual evaluation files that reveal strengths and weaknesses.
- Carrying out evaluation studies related to developing and improving the performance of senior leaders, faculty members and staff working in the college.
- Propose strategies, plans and operational policies to ensure quality and reliability.
- Develop guidelines for methods of applying quality and academic accreditation in order to reach the best.
- Developing detailed data and statistics about the college, its objectives, departments, activities and future plans to be accomplished.
- Providing advice and guidance on what the institution should do in order to improve for the best in full compliance with accreditation standards.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2026-2026-First	Ana101	Anatomy 1	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2026-2026-First	Arab108	Arabic1	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2026-2026-second	Arab2.206	Arabic2	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2026-2026-second	Ana 201	Anatomy 2	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/second	Histo202	Histology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/Third	Emb203	Embryology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/Third	Pat303	Pathology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/Fourth	Fmed405	Forensic medicine	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/Fifth	ORT 504	Orthopedics	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

2025-2026/Fifth	RAD502	Radiology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/Fifth	ENT505	ENT	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluate**

Course description template for Anatomy

1. **Course Name:**
ANATOMY / FIRST LEVEL
2. **Course Code:**
ANA 101
3. **Semester / Year:**
2025/2026 first year
4. **Description Preparation Date:**
2026/9/9
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
- 60 theoretical hours for each course, (2) hours per week - 120 practical hours for each course, 8 hours per week - Total number of units 8
7. Course administrator's name (mention all, if more than one name)
Assist. Prof. Dr. Ali Abd Alhusain hameed / E m a i l : a.ha@uos.edu.iq **Lec. Shaimaa Hameed Hassan / Email: shaima.hamid@uos.edu.iq** **Assist. Lec. Ali maged / Email alimajed@uos.du.iq**
8. Course Objectives
1. Describe the structural components of different areas of the human body. 2. Describe the basic anatomical structures of the various organs and systems of the human body, which includes (the upper and lower extremities, the chest and its appendage organs, the head and neck, the nervous system, the abdomen, the pelvis and its appendage organs). 3. The ability to distinguish the distinctive surface anatomical signs of the structures located under the skin, such as bones, muscles, and ligaments, and the internal structures of major blood vessels and internal organs. 4. The ability to know the different branches of nerves, different blood vessels, and the organs that feed them. 5. The ability to recover various muscle functions in the human body. 6. Knowing the different movements of the joints and the muscles responsible for those movements. 7. The ability to know the major clinical applications of these anatomical structure
9- Teaching and Learning Strategies

1. Theoretical lectures.
2. Recognizing and learning by seeing the human body, educational capabilities.
3. Teaching small groups.
4. Field visits to hospitals and health centers.
5. View educational videos and images for clinical related cases. The parts of the organs and how they interact and relate to each other

10. Course Structure

The structure of the course for theoretical and practice anatomy /first academic level

Week	Hours	Required educational goals	Unit name and/or topic	education method	evaluation method
1	**2 hrs. theory** **8 hrs. practical**	Teaching the student what is The human body	Introduction - Introduction to anatomy	Lecture+ lab	General question discussion + exam
2	**2 hrs. theory** **8hrs. practical**	Teaching the student what is the meaning of position & movement	Descriptive anatomical terms &planes	Lecture+ lab	General question discussion + exam
3	**2 hrs. theory** **8hrs. practical**	Teaching the student what is-Structure of Human	Systemic anatomy	Lecture+ lab	General question discussion + exam
4	**2 hrs. theory** **8hrs. practical**	Identify the Muscles, Bones, Joints	Upper Limb - Bones of the upper limb	Lecture+ lab	General question discussion + exam

5	2 **hrs. theory** **8hrs. practical**	Identify Muscles of pectoral region	Muscles of pectoral region	Lecture+ lab	General question discussion + exam
6	2 **hrs. theory** **8hrs. practical**	Identify Muscles of the arm	Muscles of the arm	Lecture+ lab	General question discussion + exam
7	2 **hrs. theory** **8hrs. practical**	Identify Muscles of the forearm	Muscles of the forearm	Lecture+ lab	General question discussion + exam
8	2 **hrs. theory** **8hrs. practical**	Identify Muscles of the hand	Muscles of the hand	Lecture+ lab	General question discussion + exam
9	2 **hrs. theory** **8hrs. practical**	Identify Cutaneuos nerves	Cutaneuos nerves	Lecture+ lab	General question discussion + exam
10	2 **hrs. theory** **8hrs. practical**	Identify Venous drainage	Venous drainage	Lecture+ lab	General question discussion + exam
11	2 **hrs. theory** **8hrs. practical**	Identify	Arteries of the upper limb	Lecture+ lab	General question discussion + exam

12	2 **hrs. theory** **8hrs. practical**	Identify Lower Limb - Introduction to lower limb	Lower Limb - Introduction to lower limb	Lecture+ lab	General question discussion + exam
13	2 **hrs. theory** **8hrs. practical**	Identify muscles of Hip & thigh	Hip & thigh muscles	Lecture+ lab	General question discussion + exam
14	2 **hrs. theory** **8hrs. practical**	Identify the Gluteal region	Gluteal region	Lecture+ lab	General question discussion + exam
15	2 **hrs. theory** **8hrs. practical**	Identify the Knee joint	Knee joint	Lecture+ lab	General question discussion + exam
16	2 **hrs. theory** **8hrs. practical**	Identify Muscles of the leg	Muscles of the leg	Lecture+ lab	General question discussion + exam
17	2 **hrs. theory** **8hrs. practical**	Identify Muscles of the foot	Muscles of the foot	Lecture+ lab	General question discussion + exam
18	2 **hrs. theory** **8hrs. practical**	Identify Arteries of the lower limb	Arteries of the lower limb	Lecture+ lab	General question discussion + exam

19	2 **hrs. theory** **8hrs. practical**	Identify important Nerves of the lower limb	Nerves	Lecture+ lab	General question discussion + exam
20	2 **hrs. theory** **8hrs. practical**	Identify Thorax - Thoracic wall & cavity	Thorax - Thoracic wall & cavity	Lecture+ lab	General question discussion + exam
21	2 **hrs. theory** **8hrs. practical**	Identify Intercostal space &muscles	Intercostal space &muscles	Lecture+ lab	General question discussion + exam
22	2 **hrs. theory** **8hrs. practical**	Identify Mediastinum region	Mediastinum	Lecture+ lab	General question discussion + exam
23	2 **hrs. theory** **8hrs. practical**	Identify Heart & pericardeum	Heart & pericardeum	Lecture+ lab	General question discussion + exam
24	2 **hrs. theory** **8hrs. practical**	Identify Lung & pleura	Lung & pleura	Lecture+ lab	General question discussion + exam
25	2 **hrs. theory** **8hrs. practical**	Identify Diaphragmatic region	Diaphragm	Lecture+ lab	General question discussion + exam

11.Cours Evaluation
-Daily exams. -evaluation perform an action practical experiment in the laboratory. -Reports preparation -Mid-course exam. -final course exam.
12. Learning and Teaching Resources
Required textbooks (curricular book , if any) Clinical Anatomy For Medical Students, by Richard S. Snell, Williams and Wilkins Cunningham"s Manual Of Practical Anatomy, Three Volumes, By GJRomanes: Oxford.Medical.Publications
Main references (source) All human anatomy books and magazines
Recommended book and references (scientific journals , reports …….) All human anatomy books and magazines
Electronic References , Website https://themdjourney.com/20-for-books-physiology-and-anatomy-medicalstudents/#The_Anatomy_Coloring_Book

Course description template for General pathology

1. **Course Name:**
General pathology
2. **Course Code:**
PAT303
3. **Semester / Year:**
2025-2026
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
Total number of hours : 240 hrs -120 theoretical -120 practical **Number of Units :12 units**
7. Course administrator's name
Name: **Lec Dr. Taban aoan** **Email : tabanaoun@uos.edu.iq** **Lec .Israa badi Email: israa.badi@uos.edu.iq**
8. Course Objectives
1. To introduce the student to the diseases of the human body and the effects of the disease on every part of the body. 2. Differentiating between normal and abnormal conditions by studying general diseases and identifying them clinically and histologically
9. Teaching and Learning Strategies
1. Theoretical lectures using the data show and interactive whiteboard to display the various medical images. 2. .Practical application of the concepts that have been studied in specialized laboratories 3. Seminars (students are assigned a topic within the curriculum for presentation and discussion) 4. Field visits to the forensic medicine department to learn how to examine the living and

dissection of the dead.

5. In-person and electronic blended education via e-learning platforms (Classroom).

10. The structure of the course for theoretical General pathology / first course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**Educationn Method**	**Evaluation method**
1	1	introduction	General Pathology	Discussions, theoretical lectures	Discussions, reports and examinations
2	4	**Cellular injury and adaptation** ❖ Definition & classification of injurious agents ❖ Mechanism of cell injury:- • Reversible injury • Irreversible injury:- necrosis & apoptosis ❖ Intracellular accumulation ❖ Cellular adaptation ❖ Degenerative changes	General Pathology	Discussions, theoretical lectures	Discussions, reports and examinations
3	4	**Inflammation** ❖ Acute inflammation • Vascular changes • Cellular changes • Chemical mediators • Morphological pattern of acute inflammation • Fate of acute	General Pathology	Discussions, theoretical lectures	Discussions, reports and examinations

		inflammation ❖ Chronic inflammation • Causes • Morphological features Granulomatous inflammation			
4	3	**Healing & repaire** ❖ Definition ❖ Cell cycle ❖ CT. response(including extracellular matrix component) ❖ Regeneration ❖ Healing of skin wounds ❖ Healing of bone fractures ❖ Factors affecting healing & complications	General Pathology	Discussions, theoretical lectures	Discussions, reports and examinations
5	6	**Haemodynamic** ❖ Congestion ❖ Edema ❖ Thrombosis ❖ Embolism ❖ Infarction ❖ Shock	General Pathology	Discussions, theoretical lectures	Discussions, reports and examinations
6	10	**Infectious diseases** ❖ host organism interaction ❖ defenses mechanism ❖ categories of infectious agents ❖ route of entry of microorganisms ❖ how infectious agents causes disease ❖ selected human infectious disease o Tb.& respiratory	General Pathology	Discussions, theoretical lectures	Discussions, reports and examinations

		tract infections o Leprosy o Bilharziasis o Hydatid disease o Aspergillosis o Pyogenic bacterial infection: staphylococcal &streptococcal spp. o Gastrointestinal tract infections ❖ Sexual transmitted diseases			
7	12	**Neoplasia** ❖ Normal cell growth ❖ Molecular base of cancer ❖ Cancer etiology ❖ Features of transformed cells ❖ Nomenclatures ❖ Non-neoplastic mass ❖ Morphological differences of benign from malignant ❖ Grading &staging of tumors ❖ Cancer epidemiology ❖ Host immunity against tumors ❖ Immune surveillance	General Pathology	Discussions, theoretical lectures	Discussions, reports and examinations

		❖ Clinical feature of tumors ❖ Lab diagnosis of cancer			
8	6	**Genetic disease** ❖ Mutation ❖ Mendelian disorders (diseases caused by single gene defects) ❖ Disorders with multifactorial inheritance ❖ Single gene disorders with a typical patterns of inheritance ❖ Pediatric diseases ❖ Congenital malformation	General Pathology	Discussions, theoretical lectures	Discussions, reports and examinations
9	5	**Disorders of immune system** ❖ Introduction (cells, cytokines, histocompatibilty) ❖ Immune mechanism of tissue injury ❖ Autoimmune diseases • Self tolerance • Mechanism of autoimmune diseases Selective examples of autoimmune diseases ❖ Immune deficiency disease ❖ Amyliodosis	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations

10	4	**Environmental diseases** ❖ Air pollution diseases ❖ Injury by chemical agents ❖ Injury by physical agents ❖ Nutritional diseases • Metabolic effect of starvation • Nutritional deficiencies • Protein energy malnutrition syndrome • Vitamins deficiency • Mineral deficiency	General Pathology	Discussions, theoretical lectures	Discussions, reports and examinations
11	8	Cardiovascular system ❖ The heart • Congestive heart failure • Ischemic heart disease • Hypertensive heart disease • Valvular heart disease • Congenital heart diseases ❖ The arterial disease • Arterioseclerosis • Vasculitis	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations

		• aneurysm ❖ Venous disease • Varicose viens • Phlebothrombosis & thrombophilibitis ❖ Lymphatic disorders ❖ Vascular tumors			
12	8	**Respiratory system** ❖ Obstructive & restructive lung disease ❖ Vascular lung diseases ❖ Pulmonary infection ❖ Lung tumors ❖ Pleural effusion ❖ Lesion of upper respiratory tract	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations
13	8	**Urinary system** ❖ Glomerular diseases ❖ Diseases affecting tubules and interstitium ❖ Cystic disease of the kidney ❖ Urinary out flow obstruction ❖ Tumors	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations
14	4	**Reproductive system** ❖ Male reproductive system • Diseases of penis • Diseases of secrotum, testis, epidydimis • Diseases of prostate	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations

15	4	**Female reproductive system** ❖ Valvitis ❖ Non- neoplastic epithelial tumors ❖ Vuvalr tumors ❖ Vagina (vaginitis, vaginal intraepithelial neoplasia & ca ❖ Cervix (inflammation, tumor) ❖ Body of uterus ❖ Fallopian tube diseases ❖ Ovaries ❖ Diseases of pregnancy	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations
16	3	**Diseases of the breast** ❖ Inflammation ❖ Fibrocystic disease(including non-proliferative & proliferative) ❖ Tumors ❖ Male breast	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations
17	10	**Gastrointestinal diseases** ❖ **Oral cavity** •Ulcerative and inflammatory lesion •Leukoplakia •Tumor of the oral cavity and tongue •Salivary gland diseases (inflammation and tumors) ❖ **Esophagous** •Esophagitis including	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations

		Barrettes- esophagous •Anatomic and motors disorders (hiatus hernia, achalsia, varices, Mallory-Weiss syndrome) •carcinoma ❖ **Stomach** •Gastritis •Gastric ulcer •tumors ❖ **Small and large intestine** •Developmental anomalies •Vascular disorders •Diarrheal diseases Idiopathic inflammatory bowel diseases Colonic diverticulosis Tumors of small and large intestine ❖ **Appendix** Appendicitis Tumors ❖ **Liver** Jaundice Hepatic failure Hepatic cirrhosis Inflammatory disorders Drug and toxin induce liver In born errors of metabolism Circulatory disorders Intrahepatic biliary tract disease			

		❖ **Gallbladder and biliary tract** Disorders of gall bladder Disorder of extrahepatic bile **Tumors** ❖ **pancreas** pancreatitis diabetes mellitus islet cell tumors			
18	6	**Endocrinal system** ❖ pituitary gland ❖ hypopituitarism ❖ hyperpituitarism ❖ posterior pituitary syndrome **thyroid gland** ❖ clinical condition (hyper and hypothyroidism) ❖ thyroiditis ❖ goiter ❖ neoplasm of thyroid gland **parathyroid gland** ❖ hypoparathyroidism ❖ hyperparathyroidism **adrenal gland** ❖ adrenocortical hyperfunction ❖ adrenocortical insufficiency ❖ neoplasm ❖ adrenomedullary	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations

		diseases ❖ multiple endocrine neoplasia syndrome			
19	6	**Diseases of blood and bone marrow** ❖ red cells disorders • hemorrhage • haemolytic anemia • anemia and diminished erythropoisis • polycythemia ❖ white cells disorders • non- neoplastic disorders of WBC • neoplastic proliferation of WBC(lymphoma, leukemia, myloproliferative disease) ❖ bleeding disorders • thrombocytopenia • coagulative disorders ❖ diseases of spleen and thymus	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations
20	4	**Diseases of locomotors system** ❖ diseases of bone • congenital and hereditary	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations

		diseases of bone • osteoporosis and acquired metabolic diseases • osteomyelitis • pagets diseases • bone tumors ❖ **diseases of joints** • osteoarthritis • gout • infectious arthritis ❖ **diseases of skeletal muscle** • muscle atrophy • myasthenia graves • inflammatory myopathies • muscular dystrophy ❖ **soft tissue tumors** • tumors of adipose tissue • tumors and tumor like lesion of fibrous tissue • neoplasm of skeletal muscle • smooth muscle tumors			
21	4	**The nervous system** ❖ introduction (cells of the nervous system) ❖ edema, herniation and	General pathology	Discussions, theoretical lectures	Discussions, reports and examinations

		hydrocephalous ❖ vascular diseases ❖ CNS trauma ❖ Infection of the NS ❖ Neoplasm of the CNS ❖ Primary diseases of myelin ❖ Degenerative diseases ❖ Diseases of peripheral nervous system			

14.Cours Evaluation

1. Mid-course and final exams.
2. 2- Pop quizzes.
3. 4- Oral, practical and clinical examinations.
4. 5- Reports.

15.Infrastructure of general pathology	
1-Required course books	Robbins Basic Pathology Hoffbrand's Essential Haematology
2- main references (sources)	Robbins and Cotran reviews ofPathology Rapid Review Pathology by Edward F. Goljan Robbins and Cotran Review of Pathology by Klatt and Kumar Hoffbrand's Essential Haematology
3- Recommended books and references(scientific journals, reports)	The American Journal of pathology Wiley, T*he Journal of Pathology*
4- Electronic references, websites	https://webpath.med.utah.edu/GENERAL.html https://diagnosticpathology.biomedcentral.com/

Course description template for Anatomy 2

1. **Course Name:**
ANATOMY / SECOND LEVEL
2. **Course Code:**
ANA201
3. **Semester / Year:**
2025/2026
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Mandatory attendance
6. **Number of Credit Hours (Total) / Number of Units (Total)**
- 90 theoretical hours for each course, (3) hours per week - 60 practical hours for each course, 2 hours per week - Total number of units 8
7. **Course administrator's name (mention all, if more than one name)**
Lec. Dr.meaad jassim / E m a i l : nameer@uodiyala.edu.iq **Lec .israa badi ./ Email israa.badi@uos.edu.iq** **Lec.. ali abd alstar / Email:** ali.abdullsattar@uos.edu.iq
8. Course Objectives

1- Describe the structural components of different areas of the human body.
2- Describe the basic anatomical structures of the various organs and systems of the human body, which includes (the upper and lower extremities, the chest and its appendage organs, the head and neck, the nervous system, the abdomen, the pelvis and its appendage organs)
3- The ability to distinguish the distinctive surface anatomical signs of the structures located under the skin, such as bones, muscles, and ligaments, and the internal structures of major blood vessels and internal organs.
4- The ability to know the different branches of nerves, different blood vessels, and the organs that feed them
5- The ability to recover various muscle functions in the human body
6- Knowing the different movements of the joints and the muscles responsible for those movements
7- The ability to know the major clinical applications of these anatomical structures

10. The structure of the course for theoretical and practical anatomy / first course

Week	Hours	Required educationalgoals	Unit name and/or topic	Education method	Evaluation method
1	**3 hrs. theory 4hrs. practical**	**Abdomen**	**Anatomy**	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
2	**3hrs. theory 4hrs. practical**	Anterior abdominal wall.(muscles,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
3	**3hrs. theory 4hrs. practical**	Hernias.(Structures & types)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
4	**3hrs. theory 4hrs. practical**	Stomach. (Structure,relations, blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations

5	**3hrs. theory 4hrs. practical**	Duodenum. (Structure, parts , relations,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
6	**3hrs. theory 4hrs. practical**	Small intestine. (Structure, relations ,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
7	**3hrs. theory 4hrs. practical**	Large intestine.(Structure, parts, relations,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
8	**3hrs. theory 4hrs. practical**	Liver&gall bladder. (Structure, relations blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
9	**3hrs. theory 4hrs. practical**	Pancrease&spleen. (Structure, relations ,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
10	**3 hrs. theory 4hrs. practical**	Kidney. (Structure , relations, blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
11	**3 hrs. theory 4hrs. practical**	Blood& lymph supply of pelvis.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
12	**3 hrs. theory 4hrs. practical**	Pelvic cavity. (Structure ,walls, contents)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
13	**3 hrs. theory 4hrs. practical**	Male genital organ. (Structure, parts , blood& nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
14	**3 hrs. theory 4hrs. practical**	Female genital organ. (Structure, parts , blood& nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
15	**3 hrs. theory 4hrs. practical**	Perineum. (Structure, blood& nerve supply	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
16	**3 hrs. theory 4hrs. practical**	Head& Neck:	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations

17	**3 hrs. theory 4hrs. practical**	Skull. (Osteology,walls, important structures&foramen)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
18	**3 hrs. theory 4hrs. practical**	Dural folds. (Structures&types)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
19	**3 hrs. theory 4hrs. practical**	Cranial venous sinuses. (Structures&types)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
20	**3 hrs. theory 4hrs. practical**	Cranial cavity. (fossa,boundries,main structures&foramena)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
21	**3 hrs. theory 4hrs. practical**	Orbit. (Muscles,relations,blood supply& nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
22	**3 hrs. theory 4hrs. practical**	Infratemporal fossa. (boundries,contents,relations& associated structures)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
23	**3 hrs. theory 4hrs. practical**	Scalp. (Layers,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
24	**3 hrs. theory 4hrs. practical**	Face. (Fascia,boundries,contents,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
25	**3 hrs. theory 4hrs. practical**	Parotid gland. (Structure ,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
26	**3 hrs. theory 4hrs. practical**	Muscles of mastication. (origion,insertion, nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
27	**3 hrs. theory 4hrs. practical**	Triangles of neck. (Structures&types)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
28	**3 hrs. theory 4hrs. practical**	Larynx. (Structure ,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations

29	**3 hrs. theory 4hrs. practical**	Nose&paranasal sinuses.(Structure ,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
30	**3 hrs. theory 4hrs. practical**	Pharynx. (Structure ,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
31	**3 hrs. theory 4hrs. practical**	Thyroid gland. (Structure ,blood&nerve supply)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
32	**3 hrs. theory 4hrs. practical**	Lymphatic drainage of the head&neck.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
33	**3 hrs. theory 4hrs. practical**	Classification.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
34	**3 hrs. theory 4hrs. practical**	Brain. (Surface anatomy&function)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
35	**3 hrs. theory 4hrs. practical**	Brain. (Blood supply&venous drainage)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
36	**3 hrs. theory 4hrs. practical**	Brain stem.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
37	**3 hrs. theory 4hrs. practical**	Midbrain.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
38	**3 hrs. theory 4hrs. practical**	Pons.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
39	**3 hrs. theory 4hrs. practical**	Medulla.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
40	**3 hrs. theory 4hrs. practical**	Brain ventricles.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations

41	**3 hrs. theory 4hrs. practical**	C.S.F circulation.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
42	**3 hrs. theory 4hrs. practical**	Cranial nerves.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
43	**3 hrs. theory 4hrs. practical**	Spinal cord & vertebral column.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
44	**3 hrs. theory 4hrs. practical**	Spinal cord. (Blood supply & venous drainage)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
45	**3 hrs. theory 4hrs. practical**	Spinal cord. (Internal structures)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
46	**3 hrs. theory 4hrs. practical**	Spinal cord. (Functions)	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
47	**3 hrs. theory 4hrs. practical**	Sympathetic nervous system.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations
48	**3hrs. theory 4hrs. practical**	Parasympathetic nervous system.	Anatomy	Discussions, theoretical lectures+ lab	Discussions, reports and examinations

11.Cours Evaluation
-Daily exams. -evaluation perform an action practical experiment in the laboratory. -Reports preparation -Mid-course exam. -final course exam.
12. Learning and Teaching Resources
Required textbooks (curricular book , if any) Clinical Anatomy For Medical Students, by Richard S. Snell, Williams and Wilkins Cunningham"s Manual Of Practical Anatomy, Three Volumes, By GJRomanes: Oxford.Medical.Publications
Main references (source) All human anatomy books and magazines
Recommended book and references (scientific journals , reports …….) All human anatomy books and magazines
Electronic References , Website https://themdjourney.com/20-for-books-physiology-and-anatomy-medicalstudents/#The_Anatomy_Coloring_Book

Course description template for Forensic medicine

1. **Course Name:**
Forensic medicine
2. **Course Code:**
FMED405
3. **Semester / Year:**
2025-2026
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
Total number of hours : 60 hrs **Number of Units :60 units**
7. Course administrator's name (mention all, if more than one name)
Name: **Dr. Samih abd odheb Email:**
8. Course Objectives
1. Learn about forensic science 2. How to deal with forensic cases received by health institutions. 3. How to write medical reports on the living and the dead. 4. How to write different death certificates and their importance. 5. Get acquainted with the rest of the relevant forensic sciences. 6. Encouraging students to engage in this rare specialty in the future
9. Teaching and Learning Strategies
1. Theoretical lectures using the data show to display the various medical images. 2. .Practical application of the concepts that have been studied in specialized laboratories 3. Seminars (students are assigned a topic within the curriculum for presentation and discussion) 4. Field visits to the forensic medicine department to learn how to examine the living and

dissection of the dead.

5. In-person and electronic blended education via e-learning platforms (Classroom).

10. The structure of the course for theoretical forensic medicine / fourthacademic level / first course					
Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**Education method**	**Evaluative method**
1	**1**	**المقدمة: يجب على الطلاب معرفة التالي**: ✓ تعريف الطب العدلي ✓ نبذة تاريخية. ✓ نظم الطبابة القضائية. ✓ الفاحص والمفحوص.	forensic medicine	Discussions, theoretical lectures and practical sessions	Discussions, reports, tests and examinations
2	2	**الجروح والرضوض: يجب على الطلاب معرفة التالي**: ✓ الرضوض. ✓ السحج. ✓ الكدمات. ✓ الجروح الرضية. ✓ الجروح الحادة.	forensic medicine	Discussions, theoretical lectures and practical sessions	Discussions, reports, tests and examinations
3		**الخضائص المميزة لاضرارالمناطق والانسجة الجسمانية المختلفة**3. **يجب على الطلاب معرفة التالي**: ✓ اضرار الرأس والدماغ. ✓ اضرار العين. ✓ اضرار الرقبة والصدر. ✓ اضرار للبطن. ✓ اضرار الاطراف.	Lecture+ lab	General question discussion + exam	Lecture+ lab

4		**عوارض وسائط النقل: يجب على الطلاب معرفة التالي**: ✓ دعس السيارات وعربات الحمل الثقيلة. ✓ عوارض قاطرات السكة الحديد وحوادث الظائرات.	forensic medicine	Discussions, theoretical lectures and practical sessions	Discussions, reports, tests and examinations
5		**جروح الاسلحة النارية: يجب على الطلاب معرفة التالي:** ✓ الية الاطلاق. ✓ كلوم المنفجرات. ✓ اضرار الطلقات المطاطية. ✓ اضرار البنادق الهوائية	forensic medicine	Discussions, theoretical lectures and practical sessions	Discussions, reports, tests and examinations
6		**اضرار الكهرباء**	forensic medicine	Discussions, theoretical lectures and practical	Discussions, reports, tests and
7		**اضرار الحرارة والبرد : يجب على الطلاب معرفة التالي :** ✓ ضربة الشمس. ✓ الحروق. ✓ اضرار البرد.	Lecture+ lab	General question discussion + exam	Lecture+ lab
8		**الغرق**	Lecture+ lab	General question discussion + exam	Lecture+ lab
9		**موت الفجائة: يجب على الطلاب معرفة التالي:** ✓ تعريف وتوضيح. ✓ الموت الفجائي المتوقع.	Lecture+ lab	General question discussion + exam	Lecture+ lab

		✓ الموت الفجائي الغير متوقع. ✓ الموت المبهم.			
10		**الكحول**	Lecture+ lab	General question discussion + exam	Lecture+ lab
11		**التسمم بالمبيدات الحشرية والزراعية**	Lecture+ lab	General question discussion + exam	Lecture+ lab
12		**التسمم بالنفط الابيض**	Lecture+ lab	General question discussion + exam	Lecture+ lab
13		**الموت: يجب على الطلاب معرفة التالي:** ✓ تعريفه وبيان الحتمال وقوعه. ✓ تشخيصه وتعيين الزمن المنقضيعلى حلوله. ✓ الصمل الموتي. ✓ التفسخ. ✓ التشمع الشحمي	Lecture+ lab	General question discussion + exam	Lecture+ lab
14		**قيافة الجثث والاشلاء والعظام**	Lecture+ lab	General question discussion + exam	Lecture+ lab
15		**قيافة الشعر والدم وسوائل الجسم**	Lecture+ lab	General question discussion + exam	Lecture+ lab
16	**1**	**الامور الجنسية: يجب على الطلاب معرفة التالي:** ✓ الفرج و غشاء البكارة. ✓ نتائج المواقعة الجنسية.	Lecture+ lab	General question discussion + exam	Lecture+ lab

			✓ الالتهاب التناسلي. ✓ الشذوذ الجنسي.		

12.Infrastructure of fornisic medicine	
1-Required course books	Textbook of Forensic Medicine andToxicology. Jaypee Brothers, Medical Publishers.2010. 2. Principles of Forensic Medicine and Toxicology. Rajesh Bardale. 2011
2- main references (sources)	Forensic Toxicology
3- Recommended books and references(scientific journals, reports)	Journal of Forensic Medicine
4- Electronic references, websites	http://www.ijfmt.com/ https://www.bmj.com/content/2/5548/361

Course Description Form for EMBRYOLOGY

1.Course Name:
EMBRYOLOGY / SECOND LEVEL
2. Course Code:
EMB205
3. **Semester / Year:**
2025/2026
Description Preparation Date:
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
- 15 theoretical hours for each course, (1) hours per week - There is no practical or Lab. - Total number of units 2
7. Course administrator's name (mention all, if more than one name)
lec . Dr. mead jasim / E m a i l : **mead @uos.edu.iq**
8. Course Objectives

- Providing the student with sufficient information about the human structure of the male and female reproductive system.
- Complete knowledge of the changes that take place in the ovary and uterus, the process of fertilization, sex determination, the division of the fertilized egg, and the process of its implantation in the uterus.
- knowledge the formation of various types of cells and organs and the change in the external appearance of the fetus as it ages
- Extensive knowledge of the formation of the placenta, the umbilical cord, all fetal membranes, the formation of twins, and birth defects
- Providing the student with good knowledge about the structure of the various systems of the human body.
- Introducing the student to the possible fetal malformations of each of the different body systems.

9. Teaching and Learning Strategies

Strategy	• Theoretical lectures. • Teaching small groups by making seminars related to the topics. • Show educational videos and pictures of types of embryos

10. Course Structure

The structure of the course for theoretical Embryology /second academic level /

Week	**Hours**	**Required learning outcome**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	1 hr. theory	Teaching the student what is the meaning of embryology	Introduction to embryology	Lecture Theoretically there is no practicality	General question discussion + exam

2	1 hr. theory	Teaching the student what is the meaning of molecular regulation signaling.	molecular regulation signaling	Lecture Theoretically there is no practicality	General question discussion + exam
3	1 hr. theory	Identify Gametogenesis	Gametogenesis	Lecture Theoretically there is no practicality	General question discussion + exam
4	1 hr. theory	Identify Gametogenesis conversion of germ cell into male	conversion of germ cell into male	Lecture Theoretically there is no practicality	General question discussion + exam
5	1 hr. theory	Identify male gametes	male gametes	Lecture Theoretically there is no practicality	General question discussion + exam
6	1 hr. theory	Identify Gametogenesis conversion of germ cell into female	conversion of germ cell into female	Lecture Theoretically there is no practicality	General question discussion + exam
7	1 hr. theory	Identify female gametes	female gametes	Lecture Theoretically there is no practicality	General question discussion + exam

8	1 hr. theory	Identify the First week to development: Ovulation	First week to development to Ovulation	Lecture Theoretically there is no practicality	General question discussion + exam
9	1 hr. theory	Identify Fertilization	Fertilization	Lecture Theoretically there is no practicality	General question discussion + exam
10	1 hr. theory	Identify implantation	Implantation	Lecture Theoretically there is no practicality	General question discussion + exam
11	1 hr. theory	Identify Cleavage zygote	Cleavage zygote	Lecture Theoretically there is no practicality	General question discussion + exam
12	1 hr. theory	Identify First week to development :Ovulation to implantation	First week to development: Ovulation to implantation	Lecture Theoretically there is no practicality	General question discussion + exam
13	1 hr. theory	Identify Second week of development Bilaminar germ disc	The second week of development Bilaminar germ disc	Lecture Theoretically there is no practicality	General question discussion + exam
14	1 hr. theory	Identify Third week of development	Third week of development: Trilaminar germ	Lecture Theoretically there is no	General question discussion +

		:Trilaminar germ disc	disc	practicality	exam
15	1 hr. theory	Identify the Third to eighth week the embryonic period	Third to eighth week the embryonic period	Lecture Theoretically there is no practicality	General question discussion + exam
16	1 hr theory	Identify embryo from the 4th-8th weeks.	embryo from the 4th-8th weeks.	Lecture Theoretically there is no practicality	General question discussion + exam
17	1 hr. theory	Identify The human fetus. And fetal membranes.	The human fetus. And fetal membranes.	Lecture Theoretically there is no practicality	General question discussion + exam
18	1 hr. theory	Identify and transverse section of The gut tube	The gut tube	Lecture Theoretically there is no practicality	General question discussion + exam
19	1 hr. theory	Identify and transverse sections of the body cavities	the body cavities	Lecture Theoretically there is no practicality	General question discussion + exam
20	1 hr. theory	Identify the Third month to birth	Third month to birth	Lecture Theoretically there is no practicality	General question discussion + exam
21	1 hr. theory	Identify placenta	Placenta	Lecture Theoretically there is no practicality	General question discussion + exam

22	1 hr. theory	Identify Somitogenesis	Somitogenesis	Lecture Theoretically there is no practicality	General question discussion + exam
23	1 hr. theory	Identify Myogenesis	Myogenesis	Lecture Theoretically there is no	General question discussion + exam
24	1 hr. theory	Identify Scheduled examination. Of embryo	Scheduled examination.	Lecture Theoretically there is no practicality	General question discussion + exam
25	1 hr. theory	Identify the fetus	the fetus	Lecture Theoretically there is no practicality	General question discussion + exam
26	1 hr. theory	Identify Teratology.	Teratology The	Lecture Theoretically there is no practicality	General question discussion + exam
27	1 hr. theory	Identify The birth defects	birth defects.	Lecture Theoretically there is no practicality	General question discussion + exam
28	1 hr. theory	Identify the Birth defects and prenatal diagnosis	prenatal diagnosis	Lecture Theoretically there is no practicality	General question discussion + exam
29	1 hr. theory	Identify the Birth defects and Postnatal diagnosis	Postnatal diagnosis	Lecture Theoretically there is no practicality	General question discussion + exam
30	1 hr. Theory	Exam	exam	Lecture Theoretically there is no practicality	General question discussion + exam

11.Cours Evaluation
-Daily exams. -evaluation perform an action practical experiment in the laboratory. -Reports preparation -Mid-course exam. -final course exam.
12. Learning and Teaching Resources
Required textbooks (curricular book , if any) Medical Embryology
Color Atlas of Embryology. Drews 1995.
Recommended book and references (scientific journals , reports …….) All human embryology books and magazines
Electronic References , Website https://themdjourney.com/20-medical-for-books-emberyologystudents/#The_Anatomy_

Course Description Form HISTOLOGY

1. **Course Name:**
HISTOLOGY / SECOND LEVEL
2. **Course Code:**
HIS 205
3. **Semester / Year:**
2025/2026 first semester + second semester
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
- 30 theoretical hours for each course, (2) hours per week - 30 practical hours for each course, 2 hours per week - Total number of units 6
7. Course administrator's name (mention all, if more than one name)
Name: Assist. Prof. Dr. marwa jamal / E m a i l : marwa.jamal@uos.edu.iq
8. Course Objectives
1. Describe the structure of the human cell and its contents in the various organs of the human body. 2. Complete knowledge of the types of tissues that make up the body's organs, such as epithelial tissue, connective tissue (genuine connective tissue, bone and cartilage, in addition to blood), muscle tissue, and nervous tissue. 3. Complete knowledge of the components of blood tissue and bone marrow and how different cells are formed. 4. The ability to know the different immune cells and organs and means of defence etc. 5. Introducing the student to the histological structure of the various organs and systems of the body, including (Digestive system, central and peripheral nervous system, respiratory system, skin, urinary system, endocrine system, male reproductive system, female reproductive system, sensory system, and cardiovascular system)

9. Teaching and Learning Strategies	
Strategy	1. Theoretical lectures. 2. Recognizing and learning to see and diagnose the type of tissue under a microscope. 3. Teaching small groups. 4. Field visits for educational laboratories in the Hospitals and health centers. 5. View educational videos and images for clinical related cases Tissues and their types to know the details of tissue structures and their functions.

Week	Hours	Required learning outcome	Unit or subject name	Learning method	Evaluation method
1	**2 hrs. theory** **2hrs. practical**	Microscopy & their types. Primary tissue & their role in formation of tissue.	Introduction to the histology	Lecture+ lab	General question discussion + exam
2	**2 hrs. theory** **2hrs. practical**	Teaching the student what is the meaning of tissue and its forms ,the cells which covered the body from outside and lining from inside .	Epithelial tissue	Lecture+ lab	General question discussion + exam
3	**2 hrs. theory** **2hrs. practical**	Modification unit for epithelial tissue. Exocrine glands & their classification.	Epithelial gland.	Lecture+ lab	General question discussion + exam
4	**2 hrs. theory** **2hrs. practical**	Identify the tissue which connect the tissue together and its types	Connective tissue	Lecture+ lab	General question discussion + exam

5	**2 hrs. theory** **2hrs. practical**	Identify the cells & fibers and its types	Cells of connective tissue	Lecture+ lab	General question discussion + exam
6	**2 hrs. theory** **2hrs. practical**	Identify the adipose cell and recognize it from other cell types	Adipose tissue	Lecture+ lab	General question discussion + exam
7	**2 hrs. theory** **2hrs. practical**	Identify the types of cartilage and its distribution in the body	Cartilage	Lecture+ lab	General question discussion + exam
8	**2 hrs. theory** **2hrs. practical**	Identify the bone tissue and its types	Bone	Lecture+ lab	General question discussion + exam
9	**2 hrs. theory** **2hrs. practical**	The central & peripheral nerves system	Nervous system	Lecture+ lab	General question discussion + exam
10	**2 hrs. theory** **2hrs. practical**	Identify the nervous tissue and its types and explains the nervous impulse reach to rest body	Nerve tissue	Lecture+ lab	General question discussion + exam
11	**2 hrs. theory** **2hrs. practical**	Identify the types of muscles and differences between them as longitudinal and transverse section	Muscle tissue	Lecture+ lab	General question discussion + exam

12	**2 hrs. theory** **2hrs. practical**	Identify the blood vascular system and its main function and	Circulatory system I	Lecture+ lab	General question discussion + exam
13	**2 hrs. theory** **2hrs. practical**	The types of artery and vein.	Circulatory system II	Lecture+ lab	General question discussion + exam
14	**2 hrs. theory** **2hrs. practical**	Identify the types, shape and function of blood cells and the number of each type.	Blood cell	Lecture+ lab	General question discussion + exam
15	**2 hrs. theory** **2hrs. practical**	Identify the way of derived of the blood cell from stem cell and differentiate of a blood cell .	hematopoiesis	Lecture+ lab	General question discussion + exam
16	**2 hrs. theory** **2hrs. practical**	Identify the lymphoid organ and tissue responsible for immunity of the body	Lymphoid organ	Lecture+ lab	General question discussion + exam
17	**2 hrs. theory** **2hrs. practical**	Identify the digestive system and explain the digest and absorb in the organ of this system	Digestive system I	Lecture+ lab	General question discussion + exam
18	**2 hrs. theory** **2hrs. practic**	Digestive Tract; General structure, the oral cavity and tongue. Pharynx and esophagus	Digestive system II	Lecture+ lab	General question discussion + exam

	al				
19	**2 hrs. theor y** **2hrs. practic al**	Stomach and Small intestine Large intestine & appendix	Digestive system III	Lecture+ lab	General question discussion + exam
20	**2 hrs. theor y** **2hrs. practic al**	Identify the organs which associated with digestive tract	Organs associated with digestive tract	Lecture+ lab	General question discussion + exam
21	**2 hrs. theor y** **2hrs. practic al**	Identify the parts of the respiratory system	The respiratory system I	Lecture+ lab	General question discussion + exam
22	**2 hrs. theor y** **2hrs. practic al**	Respiratory System; Nasal cavity, larynx and trachea.	The respiratory system II	Lecture+ lab	General question discussion + exam
23	**2 hrs. theor y** **2hrs. practic al**	Respiratory System The Lung Bronchial tree.	The respiratory system III	Lecture+ lab	General question discussion + exam
24	**2 hrs. theor y**	Identify the layers of the skin and the glands, hair and , nail	Skin	Lecture+ lab	General question discussion + exam

	2hrs. practical				
25	**2 hrs. theory** **2hrs. practical**	Identify The Urinary System The Kidney and blood supply.	The Urinary System I	Lecture+ lab	General question discussion + exam
26	**2 hrs. theory** **2hrs. practical**	Identify nephrons Ureter, urinary bladder, urethra	The Urinary System II	Lecture+ lab	General question discussion + exam
27	**2 hrs. theory** **2hrs. practical**	Identify the glands and its structure	Endocrine glands	Lecture+ lab	General question discussion + exam
28	**2 hrs. theory** **2hrs. practical**	Identify the parts of the male reproductive and their structure	Male reproduction	Lecture+ lab	General question discussion + exam
29	**2 hrs. theory** **2hrs. practical**	Identify the parts of the female reproductive and its structure	Female reproductive	Lecture+ lab	General question discussion + exam
30	**2 hrs. theory** **2hrs. practical**	Identify the ear and the eye	Photoreceptors and audio receptors	Lecture+ lab	General question discussion + exam

11.Cours Evaluation
-Daily exams. -evaluation perform an action practical experiment in the laboratory. -Reports preparation -Mid-course exam. -final course exam.
12. Learning and Teaching Resources
Required textbooks (curricular book , if any) Human Anatomy and cell physiology by Mcgraw hill 17th ed.
Main references (source) All human histology books and magazines
Recommended book and references (scientific journals , reports …….) All human histology books and magazines
Electronic References , Website **https://themdjourney.com/20-best-histology-and-physiology-books-for-medical-students/#The_Anatomy_Coloring_Book**

Course Description Form orthopedics five stage

1. **Course Name:**
Orthopedics / five LEVEL
2. **Course Code:**
ORT504
3. **Semester / Year:**
2025/2026
4. **Description Preparation Date:**
2026
5**. Available Attendance Forms:**
Mandatory attendance
6. **Number of Credit Hours (Total) / Number of Units (Total)**
- 30 theoretical hours for each course, (1) hours per week - 30 practical hours for each course, (1) hours per week - Total number of units 3
7. Course administrator's name (mention all, if more than one name)
Assist . Prof. Dr. Ali Abd Al-husain Email : a.ha@uos.edu.iq
8. Course Objectives
1-lectures cover the basic minimal knowledge required for all physicians &to utilize the available time in presenting the knowledge as simple , updated, well-illustrated, and easily understood as possible. Rare topics, and those irrelevant to our community should be omitted or given less importance and time. Lectures are delivered whenever possible by the senior academic staff. Lectures given as clinical presentation to cover each areas. 2-clinical attachments:: students are divided into 5-6 groups , students will have a clinical round in the morning discussing a clinical case from outpatients then they are subdivided to small groups to examine the patients& in the outpatient clinic. 3-problem based learning: if there is no patients with particular problem in the ward, teacher has to be a "role player" and make the students take history followed by diagnosis, investigation and management

9. Teaching and Learning Strategies	
Strategy	.Attendance a. Behavioral & ethical attendance b. Logbook for clinical cases c.Attendance in outpatient clinic The minimum accepted attendance is 70 % at the end of term examination. 2.Assessment tools a. Written examination: for assessment of general knowledge & understanding. b. Oral examination by two members of teaching staff to assess how fifth year student deal with orthopaedic scenario problems. c.Clinical examination to medical student's attendance in managing clinical cases in apprehensive way.

Week	Hours	Required learning outcome	Unit or subject name	Learning method	Evaluation method
1	**1 hrs. theory** **1hrs. practical**	Brief revision of musculoskeletal anatomy , histology and physiology Understanding fracture healing .	Basic sciences:	lecture	exam
2	**1 hrs. theory** **1hrs. practical**	Clarification of the general principles of fracture classification , description and assessment.	Introduction to fractures	lecture	exam
3	**1 hrs. theory** **1hrs. practical**	Training the students how to deal with multitrauma patients. Understanding the general AO prenciples of fracture management. Classification and management of open fractuers.	Management of fractures	lecture	exam

		Understanding the various methods of fracture management.			
4	**1 hrs. theory** **1hrs. practical**	Understanding the systemic approach to the complications of fractures.	Complications of fractures	lecture	exam
5	**1 hrs. theory 1hrs. practical**	Training the students about the prevention and the early detection of complications and its management.	Hip Dislocation & Femur neck Fractures:	lecture	exam
6	**1 hrs. theory 1hrs. practical**	Stressing the importance of hip fractures as their high mortality and morbidity. Understanding the basic methods of management hip fractures.	Inter & subtrochanteric fractures	lecture	exam
7	**1 hrs. theory 1hrs. practical**	Stressing the importance of hip fractures as their high mortality and morbidity. Understanding the basic methods of management hip fractures.	Supracondylar tibial plateau & patellar fractures	lecture	exam
8	**1 hrs. theory 1hrs. practical**	Understanding and developing basic skills to diagnose injuries around the	Patellar Dislocation, Knee Dislocation and tibial shaft fracture	lecture	exam

		knee and providing the early supportive measures , definitive treatment and rehabilitation programs.			
9	**1 hrs. theory 1hrs. practical**	Stressing the significance of knee dislocation as a serious limb threatening condition. Understanding the general outlines of management of tibial shaft fractures including identification and treatment of open fractures.	Ankle injuries	lecture	exam
10	**1 hrs. theory 1hrs. practical**	Stressing the importance of ankle injuries as being the most common lower limb injuries. Focusing on general prenciples of assessment and treatment.	Foot injuries	lecture	exam
11	**1 hrs. theory 1hrs. practical**	Training the students to acquire the basic skills of managing foot injuries including diagnosis , management and prevention of complications.	Injuries of spine	lecture	exam

12	**1 hrs. theory 1hrs. practical**	Understanding the basic principles of classifying spine injuries as being the key for proper management. Focusing on associated neurological injuries.	Shoulder and upper arm injuries	lecture	exam
13	**1 hrs. theory 1hrs. practical**	Stressing the significance of determining the plan of management of shoulder and upper arm injuries. Understanding the indications for surgical and non surgical treatments	Elbow and forearm injuries.	lecture	exam
14	**1 hrs. theory 1hrs. practical**	Developing basic skills to diagnose injuries around the elbow and providing the early supportive measures, and planning for definitive treatment.	Wrist and hand injuries	lecture	exam
15	**1 hrs. theory 1hrs. practical**	Stressing the importance of wrist injuries as being a common injuries with significant morbidity. Understanding the surgical and non surgical treatments with indications of each.	osteoarthrosis	lecture	exam
16	**1 hrs. theory 1hrs. practical**	Stressing the importance of studying osteoarthrosis as being the most common type of joint disease. Training the students to be familiar with the XR features of osteoarthrosis. General outlines of	Introduction and benign bone tumours	lecture	exam

		management.			
17	**1 hrs. theory 1hrs. practical**	Stressing the importance of the bone tumours radiographic description and diagnosis. Emphasizing the general outlines of treatment including the medical and surgical lines.	Malignant bone tumours	lecture	exam
18	**1 hrs. theory 1hrs. practical**	Stressing the importance of the bone tumours radiographic description and diagnosis.	Disorders of spine 1	lecture	exam
19	**1 hrs. theory 1hrs. practical**	Emphasizing the general outlines of treatment strategies .	Disorders of spine 2	lecture	exam
20	**1 hrs. theory 1hrs. practical**	Emphasizing the importance of spine disorders as being a common source of morbidity. Training the students to acquire the basic skills for radiological diagnosis of spine disorders. General outlines of management including the medical and surgical options.		lecture	exam

21	**1 hrs. theory 1hrs. practical**	Emphasizing the importance of spine disorders as being a common source of morbidity. Training the students to acquire the basic skills for radiological diagnosis of spine disorders. General outlines of management including the medical and surgical options.	Disorders of hip 1	lecture	exam
22	**1 hrs. theory 1hrs. practical**	Training the students to acquire the basic skills of XR interpretation in case of hip disorders. Training the students to run proper clinical examination of the hip. Emphasizing the general outlines of management of hip disorders	Disorders of hip 2	lecture	exam
23	**1 hrs. theory 1hrs. practical**	Training the students to acquire the basic skills of XR interpretation in case of hip disorders. Training the students to run proper clinical examination of the hip.	Disorders of the knee	lecture	exam

24	**1 hrs. theory 1hrs. practical**	Emphasizing the general outlines of management of hip disorders	Disorders of ankle and foot 1	lecture	exam
25	**1 hrs. theory 1hrs. practical**	Training the students to acquire the basic skills of proper clinical examination of the knee disorders. General outlines of management including the medical and surgical options.	Disorders of ankle and foot 2	lecture	exam
26	**1 hrs. theory 1hrs. practical**	Stressing the significance of foot and ankle disorders as being a common cause for morbidity. Training the students to develop the skills of the XR interpretation. General outlines of management including the medical and surgical options.	Skeletal dysplasias	lecture	exam
27	**1 hrs. theory 1hrs. practical**	Give a general understanding of common dysplastic skeletal disorders , their clinical features and management.	Low back pain	lecture	exam

11.Cours Evaluation

-Daily exams. -evaluation perform an action practical experiment in the laboratory. -Reports preparation -Mid-course exam. -final course exam.
12. Learning and Teaching Resources
Required textbooks (curricular book , if any)
Main references (source) All human orthopedics books and magazines
Recommended book and references (scientific journals , reports …….) All human histology books and magazines
Electronic References , Website

Course Description Form for Otolaryngology

1. **Course Name:**
ENT
2. **Course Code:**
ENT505
3. **Semester / Year:**
fifth stages
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Theoretical, practical and discussions
6. Number of Credit Hours (Total) / Number of Units (Total)
The fifth stage ENT /30 theoretical hours and 30 practical hours(3 units)
7. Course administrator's name (mention all, if more than one name)
Lec .dr taban aoun Email :- tabanaoun@uos.edu.iq
8. Course Objectives
1-Training students to obtain the scientific skills necessary to work in scientific institutions concerned with pediatrics. 2 - Training students to obtain practical skills in using the means, information, skills and laboratories necessary for the diagnosis and treatment of the child. 3 -Providing students with the practical field skills necessary to distinguish genetic phenomena such as the presence of beneficial genetic mutations and to benefit from them. 4 - Training students to obtain the skills required to work in the specialty of pediatrics.
9. Teaching and Learning Strategies

Strategy	-Lectures, computers, plasma screens, modern scientific equipment,clinical tours, educational seminars, audio-visual equipment, discussions, teaching hospitals. In-person and electronic blended education (via the Classroom platform).

10- Course Structure

course for Ear, Nose and Throat / fifth level

Week	Hours	Required educational goals	Unit name and/or topic	education method	
30 week		**1. Introduction** Ways of lectures, assessment and examination. **2. Anatomy of Ear and Physiology of Hearing** Anatomy of the external, middle, and inner ear. physiology of sound transmission. How human can hear. 3. **Diseases of external ear** Diseases of auricle & external auditory canal can be classified into congenital, traumatic, infected and tumors. 4.**Otitis media** Infection or inflammation of middle ear which is either acute or chronic and mostly affect children and more among poor families. **5. Otitis media with effusion** a. It's the most common cause of hearing loss in children. Preceded by URTI and initiated by Eustachian tube closure. b. 50% resolved spontaneously, other complicated as adhesive OM. **6. Hearing loss** a. Means inability to detect or understand the sound. b. Can be conductive, sensory or mixed. Each one has its causes & treatment. **7. Vestibular system anatomy and physiology** a. Vestibular system consists of S.S.C., utricle & saccule.	Ear, Nose and throat	Lecture	daily exams, half-course exams, final course and discussing

		Each has its function to maintain the body balance. **8. Facial nerve** a. Bell's palsy is the commonest cause of facial palsy, other are infection, trauma, tumor. Each treated accordingly. **9. Anatomy of throat & physiology of deglutition** a. Pharynx is divided into nasopharynx, oropharynx and laryngopharynx. **10. Tonsillitis:** Causes, presentation and treatment. Complications and indications of surgery. **11. Adenoiditis** a. Causes, presentations, complications and indications for surgical treatment. **12. Pharyngitis** a. Types, causes, clinical features and treatment. **13. Neck space infections** a. Retropharyngeal & Parapharyngeal abscess: Causes, presentations and treatment. **14. Anatomy of larynx & physiology of phonation** a. Larynx framework and blood and nerve supply. b. Lung, trachea, vocal cords and pharynx all play their role in voice production. **15. Tumors of larynx** a. Benign & malignant. **16. Neck mass** a. Neck masses can be classified into midline & lateral groups. Causes, presentation and treatment. **17. Anatomy of the nose** a. Nasal skeleton, blood and nerve supply. **18. Epistaxis** a. Causes, site of bleeding and			

		management. **19. Nasal trauma** a. Fracture nasal bone and septum. b. Septal haematoma management. **20. Allergic rhinitis** a. Predisposing factor, presentation, pathogenesis and treatment. **21. Nasal polyp** a. Etiology, theories, presentation & treatment. **22. Sinusitis** a. Causes, bacteriology, presentation and treatment. **23. Nasopharyngeal tumors** a. Benign and malignant. b. Angiofibroma, fibroma. c. S.C.C. of fossa of Rosenmüller is the commonest malignant tumor. **24. Oropharyngeal tumor** a. S.C.C. of tonsil is the commonest malignant tumor. Lymphoma is common too. **25. Tracheostomy** a. Definition, indications, post-operative care and complications. **26. Vertigo** a. Causes and treatment. **27. ENT emergencies** a. How to deal with emergencies accordingly. **28. Foreign body in ENT** a. F.B. in the ear, nose, throat, and management of each. **29. Laser in ENT** a. Physics of laser, types and uses. **30. Trauma in ENT** a. Including trauma to ear, nose and throat, presentations and			

		management.			

Cours Evaluation
1. Mid-course and final exams. 2. Pop quizzes. 3. Oral, practical and clinical examinations. 4. Reports.

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Course description template for Radiology five stage

1- Course Name
Radiology
2. Course Code:
RAD502
3. Semester / Year:
2025 -2026
4. Description Preparation Date:
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
Total number of hours : 60 hrs **Number of Units :3 units**
7. Course administrator's name
Name: Mead jasim Email:
8- Course Objectives
Acquaintance with medical terms, which facilitates their use in the primary and higher school years
9- Teaching and Learning Strategies
1..Theoretical lectures Using (Data Show) to display medical images **2.** Seminars (students are assigned a topic within the curriculum for presentationand discussion) **3.** In-person and electronic blended learning via the e-learning platform (Classroom).

10 -The structure of the course for theoretical and practical radiology five academic level					
week	hour	**Required educational Goals**	Unit name and/or topic	education method	**Evaluation Method**
Week 1	2	Introduction 1	Students should know the basic principles of radiation physics, including image production, radiation protection, effects of radiation on tissues, and types and purposes of contrast materials.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 2	2	Introduction 2	· Students should know the basic principles of ultrasound, computed tomography, MRI, nuclear medicine, and special procedures. · Students should be able to order radiologic examinations appropriately and judiciously.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 3	2	Respiratory system 1	students should know : - The radiological procedures used for chest pathology, their indications and	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
	2		strength and weakness of each procedure. - interpretation of normal chest radiograph	Interactive theoretical lecture + Training	Daily exams - Daily attendance

			including technical quality factors assessment -end of the lecture : interactive discussion of technically errors in few radiographs	clinical	
Week 4	2	Respiratory system 2	-Start of the lecture: Short review of previous lecture. -lecture : interpretation of the abnormal chest radiograph -End of the lecture: summary of important points in the lecture.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 5	2	Respiratory system 3	- Main topics: pleura, mediastinum & diaphragm. - Students should know the emergency and common diseases e.g. Pleural effusion and pneumothorax with chest radiograph. - Students should know what is the next requested radiological procedure for details analysis of such diseases.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 6	2	Respiratory system 4	- Main topics: pulmonary collapse, pneumonia, lung abscess,	Interactive theoretical lecture + Training	Daily exams - Daily attendance

			pulmonary TB, hydatid disease, air way diseases, respiratory distress in newborns and pulmonary emboli and infection. - objective :to learn the students about the common radiological signs in such diseases with chest radiograph " x- ray cases review " and what to order next.	clinical	
Week 7	2	Respiratory system 5	Min topics : Ca bronchus , metastatic lung diseases , lymphoma , chest trauma Objective : common presenting radiological signs in short , with cases radiographs review	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 8	2	Cardiovascular system	- Student should know the imaging modalities used for CVS - Stude nts should recogni ze cardiom egaly on chest X-ray. - Short review on common diseases e.g. pulmonary edema & heart	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance

			failure.		
	2		* end of the lecture : interactive discussion of some cases	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 9	2	Plain abdomen	How to approach to normal plain abdominal film assessment How to approach to abnormal abdominal film assessment * end of the lecture : interactive discussion of emergency cases like intestinal obstruction and pneumoperiton eum	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 10	2	GIT 1	Esophagus common diseases and how to radiologically approached	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 11	2	GIT 2	Small intestine common diseases and how radiologically approached	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 12	2	GIT 3	Large bowel common diseases and how radiologically	Interactive theoretical lecture + Training	Daily exams - Daily attendance

			approach	clinical	
Week 13	2	Hepato-biliary system1	- Short review of hepato-biliary radiological investigation methods and their indications. - starting knowledge how common diseases radiologically appear.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 14	2	Hepato-biliary system2	- complementary lecture - common diseases	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 15	2	Hepato-biliary system3	- complementary lecture - common diseases	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 16	2	Breast imaging	Review the mammographic technique , screening mammography protocols and differentiate benign from malignant breast lesions on mammographic and ultrasound bases	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 17	2	Urinary tract 1	- Review of Imaging techniques used and their	Interactive theoretical lecture +	Daily exams - Daily attendance

			indications - Common urinary tract problems: calculi and obstruction, Renal parenchymal disease.	Training clinical	
Week 18	2	Urinary tract 2	- Complementally lectures for common urogenital problems: Renal tumor, infection, congenital anomalies, urinary bladder, prostate, urethra, and scrotal pathology. * end of the lecture : interactive review of some cases	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 19	2	Female genital tract	Imaging techniques, pelvic masses, gynecological infections, obstetrical imaging.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 20	2	Peritoneal cavity and retroperitoneum	Anatomy, imaging techniques, adrenal, aortic aneurysm, retroperitoneal and psoas abscess.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 21	2	Bones 1	Imaging techniques, solitary bone lesion: bone	Interactive theoretical lecture	Daily exams - Daily attendance

			tumor, osteomyelitis.	+ Training clinical	
Week 22	2	Bones 2	Multiple focal lesions, causes of altered bone density, changes of bonne shape	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 23	2	Joints	Imaging techniques, arthritis, infection, some congenital disorders.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 24	2	Spine	Tumors, infection, trauma, degenerative, spinal cord lesions.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 25	2	Skeletal trauma	Imaging techniques, specific injuries.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 26	2	Skull and brain 1	Imaging techniques, plain X-ray, CT, MRI, ultrasound.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 27	2	Skull and brain 2	Brain tumor, stroke.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance

Week 28	2	Skull and brain 3	Infections, head injuries.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 29	2	Sinus, orbit, neck	Related pathology, imaging techniques and injuries.	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance
Week 30	2	Vascular radiology	Diagnostic angiography, Doppler study, interventional radiology	Interactive theoretical lecture + Training clinical	Daily exams - Daily attendance

11.Cours Evaluation

• Mid- and end-of-course exams.
• Practical, oral and clinical examinations.
• Reports preparation.
• Short daily exams

12. Learning and Teaching Resources

Required textbooks (curricular book , if any)&practice of medicine.

Main references (source).
-medicine of radiology

Recommended book and references (scientific journals , reports …….).

- All internal medicine books and magazines.

Electronic References , Website .

- Medscape., e medicine.

Course Description Form Arabic language 1

1. **Course Name:**
Arabic language 1
2. **Course Code:**
ARAB108
3. **Semester / Year:**
Year 2026 – 2025
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
First stage : 60 theoretical hours / 2units (90) hours
7. Course administrator's name (mention all, if more than one name)
Name:assist .lec.hassan dakhel Email: hasandakhil@uos.edu.iq

8. Course Objectives	
Course Objectives	• تنمية قدرة الطلبة على **فهم النصوص القرآنية والحديثية والأدبية** واستخلاص معانيها وقيمها . • إكساب الطلبة المهارات الأساسية في **الصرف والنحو** وتطبيق القواعد اللغوية بصورة صحيحة . • تنمية مهارات الطلبة في **القراءة والكتابة والإملاء**، مع الاستخدام الصحيح لعلامات الترقيم والهمزات . • تعريف الطلبة بأساسيات **البلاغة العربية** وتمكينهم من تمييز التشبيه والمجاز والاستعارة والكناية وتطبيقها . • تنمية قدرة الطلبة على **استخدام المعاجم العربية واكتشاف الأخطاء اللغوية الشائعة وتصحيحها**، وتعزيز سلامة استعمال اللغة العربية .
9. Teaching and Learning Strategies	
Strategy	• Theoretical lectures.

10. Course Structure

The structure of the course for theoretical Arabic / first academic level					
Week	**Hours**	**Required educational goals**	**Unit name and/or topic**	**Evaluation method**	**education method**
٣٠ أسبوع	ساعتين نظرية	**١ .القرآن الكريم والحديث النبوي الشريف** • من سورة البقرة الآيات ٢٢٣-٢٦١ • الحديث النبوي الشريف قال رسول الله صلى الله عليه واله وسلم: «إنما بعثت لأتمم مكارم الأخلاق» **٢ .الأدب العربي** • الاختيارات الشعرية في العصر الجاهلي المعلقات اختيارا. • قصيدة عنترة بن شداد يا عبل اين من **المنية مهربي** **ان كان ربي في السماء قضاها** • نماذج شعرية مختارة **٣ .علم الصرف** • الميزان الصرفي • الجموع في اللغة العربية • إسناد الفعل للضمائر • تصريف الأفعال من حيث: ○ الصحة والاعتلال ○ التجرد والزيادة • المشتقات	اللغة العربية ١	Theoretical lectures And discussions	exam

			٤ .المهارات اللغوية • الحروف الهجائية (القمرية والشمسية) • احكام كتابة علامات الترقيم • احكام كتابة الهمزة (الأولى والمتوسطة والمتطرفة وهمزتا الوصل والقطع) **٥ .المعاجم العربية** • المدارس المعجمية • معاني الالفاظ الغريبة في القران الكريم كالفظة تفهم – فرشا -نقيرا والاعتماد في ذلك على كتاب المفردات للراغب الاصفهاني. • منهج مدرستي العين والأساس والتمرين على استخراج الالفاظ. • الأخطاء اللغوية الشائعة **الفصل الثاني** **١ .القرآن الكريم والحديث النبوي الشريف** • من سورة الحج الآيات ١-٥ • الحديث النبوي الشريف قال رسول الله صلى الله عليه واله وسلم: «خيركم من تعلم القرآن وعلمه« **٢ .الأدب العربي** • سبعة أبيات من قصيدة		

		ابن الرومي **عدوك من صديقك مستفاد** **فلا تستكثرن من الصحابي** • القيم الإنسانية في الشعر الجاهلي والإسلامي **٣ .النحو العربي** • أقسام الكلام وعلامات الإعراب • المعرب والمبني - المعرفة والنكرة • المبتدأ والخبر • النواسخ • الفاعل ونائب الفاعل **٤ .البلاغة العربية** مقدمة عامة في علوم البلاغة تعريفها لغة واصطلاحا مدخل في تعريف علوم البلاغة بيان علاقتها باللغة العربية علم البيان (تعريفه وانواعه) التشبيه (تعريفه وأنواعه وتطبيقاته) المجاز اللغوي (تعريفه وأنواعه وتطبيقاته) الاستعارة (تعريفه وأنواعه وتطبيقاته) الكناية (تعريفه وأنواعه وتطبيقاته) من الأخطاء اللغوية الشائعة			

11.Cours Evaluation
• Mid- and end-of-course exams. • Reports preparation. • Short daily exams
12. Learning and Teaching Resources
Required textbooks (curricular book ,
Main references (source).
Recommended book and references (scientific journals , reports …….). - All books and magazines.
Electronic References , Website .

Course Description Form Arabic language 2

1. **Course Name:**
Arabic language 2
2. **Course Code:**
ARAB108
3. **Semester / Year:**
Year 2026 – 2025
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
First stage : 60 theoretical hours / 2units (90) hours
7. Course administrator's name (mention all, if more than one name)
Name:assist .lec.muntadher maged Email: MuntazerMajid@uos.edu.iq

8. Course Objectives	
Course Objectives	• تنمية قدرة الطلبة على **فهم النصوص القرآنية والحديثية والأدبية** واستخلاص معانيها وقيمها . • إكساب الطلبة المهارات الأساسية في **الصرف والنحو** وتطبيق القواعد اللغوية بصورة صحيحة . • تنمية مهارات الطلبة في **القراءة والكتابة والإملاء**، مع الاستخدام الصحيح لعلامات الترقيم والهمزات . • تعريف الطلبة بأساسيات **البلاغة العربية** وتمكينهم من تمييز التشبيه والمجاز والاستعارة والكناية وتطبيقها . • تنمية قدرة الطلبة على **استخدام المعاجم العربية واكتشاف الأخطاء اللغوية الشائعة وتصحيحها**، وتعزيز سلامة استعمال اللغة العربية .
9. Teaching and Learning Strategies	
Strategy	• Theoretical lectures.

10. Course Structure

The structure of the course for theoretical Arabic / second academic level

Week	Hours	Required educational goals	Unit name and/or topic	Evaluation method	education method
٣٠ أسبوع	ساعتين نظرية	**القران الكريم والحديث النبوي الشريف** ➢ من سورة الاسراء الايات من (٢٩-٢٣) ➢ من الحديث النبوي الشريف: قال رسول الله صلى الله عليه واله وسلم :(ان الله يحب اذا عمل احدكم عملا ان يتقنه) ➢ من أبيات من قصيدة الشريف الرضي في رثاء والدته. **أبكيك لو نقع الغليل بكائي** **واقول لو ذهب المقال** **بدائي** **الادب العربي** _دالية ابي العلاء المعري غير مجد في ملة واعتقاد نوح باك ولا ترنم شاد **أبيات لكل من :** أ-الجواهري ب- السياب مقاطع من انشودة المطر ,او غريب على الخليج **فنون النثر** **النحو العربي** الفعل المضارع ونصبه وجزمه المجرورات النصوبات **مهارات لغوية** ➢ احكام كتابة التاء (المفتوحة والمربوطة) ➢ احكام كتابة الالف (الممدودة والمقصورة) ➢ كتابة الضاد والظاء **المعاجم العربية** ➢ مراحل جمع اللغة ➢ معجمات الالفاظ والدلالة	اللغة العربية ٢	Theoretical lectures And discussions	exam

		➢ من الاخطاء اللغوية الشائعة **الفصل الثاني** **القران الكريم والحديث النبوي الشريف** ➢ من سورة يوسف (٧-١) ➢ من الحديث النبوي الشريف (لا تحاسدوا ,ولا تناجشوا,ولا تباغضوا,ولا تدابروا ,ولا يبع بعضكم على بيع بعض ,وكونو عباد الله اخوانا المسلم اخو المسلم لا يظلمه ولايحقره ولا يحذله التقوى هاهنا ويشير الى صدره ثلاث مرات بحسب امري من الشر ان يحقر اخاه المسلم كل المسلم حرام دمه وماله وعرضه) **الادب العربي** ➢ **أبيات من ميمية المتنبي :** واحر قلباه ممن قلبه شبم ومن بجسمي وحالي عنده سقم ➢ **أبيات من جيمية ابن الفارض :** ما بين معترك الاحداق والمهج ➢ **أبيات لكل من:** i. مصطفى جمال الدين (رائيته) بغداد ما اشتبكت عليك الاعصر ...			

		ii. محمد مهدي الجواهري من قصيدة (سلام على باسقات النخيل ... **الصرف** **تصريف الاسماء :** أ-الاسم من حيث التذكير والتأنيث ب – الاسم من حيث التجرد والزيا ج- الاسم من حيث الافراد والتثنية والجمع **النحو العربي** ➢ العدد واحكامه ➢ التوابع **المعاجم العربية** ➢ منهج مدرستي (المقاييس)و (الصحاح),والتمرين على استخرج الالفاظ **البلاغة العربية** ➢ علم البديع واثره في بلاغة الكلام أ- المحسنات المعنوية (التورية ,والطباق ,والمقابلة ,وحسن التعليل ,تاكيد المدح بما يشبه الذم) ب- المحسنات اللفظية (الجناس ,والسجع ,والاقتباس ,والتضمين) ➢ من الاخطاء اللغوية الشائعة			

11.Cours Evaluation
• Mid- and end-of-course exams. • Reports preparation. • Short daily exams
12. Learning and Teaching Resources
Required textbooks (curricular book ,
Main references (source).

Recommended book and references (scientific journals , reports …….). - All books and magazines.
Electronic References , Website .

Academic description form for the biochemistry Branch

This course description, which must be connected to the program description, offers the essential synopsis of the key features of the course and the learning goals that the student is expected to accomplish. It also shows whether the student has taken full advantage of the learning opportunities..

1. Program Vision

- Effective contribution to medical progress through education and the preparation of qualified doctors to provide the best medical services and the continuation of scientific research in all medical fields.
- Preparing physicians distinguished by competence and scientific experience, reinforced by an understanding of the biochemical bases of the vital processes that occur within the human body in normal and diseased cases.

2. Program Mission

- Excellence in creating and following advanced scientific methods in conducting pathological analyzes and preparing medical scientific research that contributes to community service.
- Establishing solid relationships with researchers in international universities.

3. Program Objectives

- Keeping abreast of scientific development in developing education programs and using the latest programs developed for medical education in accordance with the modern academic curriculum.
- Contribute to providing the community with scientifically distinguished doctors who have experience in the approved scientific foundations to conduct all pathological analyzes related to clinical biochemistry.
- Giving lectures to postgraduate students in the colleges of the university, as well

4. **Program Accreditation**
Theoretical and practical study and discussions in college and in teaching hospitals.

5. **Other external influences**
A teaching hospital, library, internet, community, doctors' syndicate.

6. **Program Structure**

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	1		100%	Basic
College Requirements	1		100%	Basic
Department Requirements	1		100%	Basic
Summer training	None	None	None	None
Other	None	None	None	None

- Notes may include whether the course is core or elective.

7. Program Description				
Year/Level	Course code	Course name	Credit Hours	
			theoretical	Practical
2025-2026/First	chem.101	Medical chemistry	3 hours per week course (30 weeks)	2 hours per week course (30 weeks)
2025-2026 / Second	Bioc205	Biochemistry	3 hours per week course (30 weeks)	2 hours per week course (30 weeks)
2025-2026/third	Pha302	Pharmacology	3 hours per week course (30 weeks)	2 hours per week course (30 weeks)
2025-2026/third	Com 304	Community medicine3	1 hours per week course (30 weeks)	1 hours per week course (30 weeks)
2025-2026/fourth	Cmed 406	Community medicine4	3.5 hours per week course (30 weeks)	4 hours per week course (30 weeks)
2025-2026/first	Com 105	Computer science	1 hours per week course (30 weeks)	2 hours per week course (30 weeks)
2025-2026/Second	Comp2.207	Computer science2	1 hours per week course (30 weeks)	2 hours per week course (30 weeks)
2025-2026/fourth	Behav 404	Behavioral science	1 hours per week course (30 weeks)	-
2025-2026/fourth	Ethic 407	Medical ethics	1 hours per week course (30 weeks)	-
2025-2026/fifth	Der 509	Dermatology	1 hours per week course (30 weeks)	1 hours per week course (30 weeks)
2025-2026/fifth	Psy 507	Psychiatry	2 hours per week course (30 weeks)	1 hours per week course (30 weeks)

8. Expected learning outcomes of the program

Knowledge	
1- Preparing students with high competence in the theoretical and practical foundations of chemistry related to the medical fields and molecules of biochemistry and clinical chemistry. 2- Providing them with information about the steps of vital metabolic reactions of carbohydrates, lipds and proteins within the human body. 3- Teaching students how to conduct clinical chemistry and cancer analysis 4- .By the end of the course, students should be able to define mental disorders, comprehend their classification and etiology, as well as their epidemiology, diagnostic standards, and treatment 5- The ethical codes of issues regarding reproduction 6- To develop relevant competencies and skills in epidemiology and statistics so as to be able to measure and evaluate health and health care services 7- Describe the pathophysiology of diseases and explain the rational basis for the use of drugs.	1- Identifying diseases and clinical conditions resulting from disorders of metabolic processes in the human body. 2- Explaining the biochemical methods used in diagnosing some diseases and clinical conditions. 3- The common skin diseases, sexualy transmitted diseases and some rare skin disorders 4- Explain key theories of human behavior (e.g., Health Belief Model, Theory of Planned Behavior, Transtheoretical Model). Describe the impact of biopsychosocial factors on health and disease. 6- Students should have a general idea about the basic types and structure of computers
Skills	
1- Knowledge of the biochemical analyzes required for pathological cases and knowledge of the interactions and diagnosis.	1- Accurate clinical diagnosis of pathological conditions.
2- Teaching the subjects of medicinal chemistry, biochemistry, and clinical chemistry to students of the medical group colleges.	2- Conduct theoretical and practical clinical research.
Ethics	
Enhancing cooperation and teamwork to create a healthy environment suitable for humans.	Conducting community awareness and guidance campaigns to create a healthy environment and preserve human health.
Enhancing the ethical and humanitarian aspects that a doctor must possess.	Highlighting the human and ethical aspects of the doctor in dealing with the patient.

9. Teaching and Learning Strategies

1- Giving theoretical lectures.
2- Conducting experiments in practical laboratories.
3- Teaching small groups
4- Field visits to hospitals and health centers.
5- - Display educational videos and images of clinical cases related to biochemical disorders within the human body.

10. Evaluation methods

1- Quizzes
2- Evaluation of practical experiments in the laboratory.
3- Mid-course exam.
4- - The final exam of the course.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Sk (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Asst. Pro. Dr Qayssar abd	Veterinary medicine	Biochemistry			✓	
Prof .dr hatim abd alkarem	Veterinary medicine	Physiology			✓	
Asst. Pro. Dr Jafer sadiq	Nurse	Psychiatry			✓	None
Lecture .dr. alaa hamid	Medicine and General Surgery	Dermatology			✓	None

Lecture dr. muhanned karem	**Chemistry**	**Medical Biochemistry**			✓	**None**
Lecture .husain flaih	**Chemistry**	**Medical Biochemistry**			✓	**None**
Asst. Pro. Dr Marwa gabar	**Nurse**	**Psychiatry**			✓	**None**
Lecture. Dr layla aoun	**Nurse**	**Gynecology**			✓	**None**
Lecture. Dr israa dheaa	**Nurse**	**Gynecology**			✓	**None**
Assist lec iman ismael	**Computer science**	**AI**			✓	**None**

Professional Development

Mentoring new faculty members

Introductory seminars and symposia for new faculty members with periodic meetings to introduce them to the work with daily guidance and continuous follow up along with advising and instructing them.

Professional development of faculty members

Continuous learning by searching for developments using the library and the Internet, in addition to attending seminars and specialized scientific symposium, along with active attendance in teaching hospitals to hone skills.

12. Acceptance Criterion

Admission is carried out centrally through the Ministry of Higher Education and Scientific Research, based on the student's score in the twelfth grade (scientific branch) after preparing the online form for that.

13. Program

1- Prescribed books:

- Harper's Biochemistry , 31 ST Edition , 2018
- Lippincott Illustrated Reviews : Biochemistry , Seventh Edition , 2018 .
- Lehninger Principle of Biochemistry , 4 th Edition , 2005 .
- Essentials of Medical Biochemistry with clinical cases , 3 rd Edition , 2022. By N.V.Bhagavan and chury – Eun Ha.

2- Recent and emerging research and studies.

3- Reputable and reliable scientific websites linked to international scientific institutions and centers.

14. **Program Development Plan**
Developing academic curricula annually to suit modern global developments in the field of biochemistry and techniques for conducting clinical chemical analyses.

Program Program														
				Required program Learning outcomes										
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2025-2026/First	chem.101	Medical chemistry	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026 / Second	Bioc205	Biochemistry	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/third	Pha302	Pharmacology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/third	Com 304	Community medicine3	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/fourth	Cmed 406	Community medicine4	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/first	Com 105	Computer science	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/Second	Comp2.207	Computer science2	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/fourth	Behav 404	Behavioral science	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

2025-2026/fourth	**Ethic 407**	**Medical ethics**	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/fifth	**Der 509**	**Dermatology**	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/fifth	**Psy 507**	**Psychiatry**	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form Medical chemistry

1. **Course Name:**
Medical chemistry
2. Course Code:
Chem 101
3. Semester / Year:
2026 – 2025
4. Description Preparation Date:
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
150 hours [90 hours (theoretical), 60 hours (practical)] / **8 units**
7. Course administrator's name (mention all, if more than one name)
Assist Prof. Dr. qayssar abd alhusain **Email:** qayssarabdulhussein@uos.edu.iq **Lec.** Dr muhaned karem **Email: mohanad.karim@uos.edu.iq** **Lec.husain flih** **Email hussein.faleih@uos.edu.iq**
8. Course Objectives

Course Objectives	• Preparing scientifically and practically competent students in the fields of medical and clinical chemistry. • Understanding the basics of biochemical variables that occur in the case of disease, linking them clinically, and accurately diagnosing them • Follow modern methods in pathological analysis techniques to obtain accurate results, qualify graduates scientifically and professionally, prepare competent researchers in clinical medical fields, and find solutions for health problems.
9. Teaching and Learning Strategies	
Strategy	• Theoretical lectures. • Conducting experiments in special practical laboratories. • Teaching small groups. • Field visits to hospitals and health centers. • Display educational videos and images of clinical cases related to biochemical disorders within the human body.

10. Course Structure

The structure of the course for theoretical medical chemistry / first academic level / the first course

Week	Hours	Required educational goals	Unit name and/or topic	Evaluation method	education method
1	14		**Analytic chemistry**	Theoretical lectures And discussions	exam
2	2	Introduction, types of analytical chemistry, quantitative analysis, qualitative analysis Chemical reactions	**Introduction of analytical chemistry**	Theoretical lectures And discussions	Exam
3	2	Molarity, Formality, Normality, Molality, The mole fraction, Percentage concentrations, (ppm), Density and Specific Gravity	**Concentrations**	Theoretical lectures And discussions	Exam
4	3	Acids, Bases, alkali, Amino acids, Zwitterions, Salts, Neutralization and Digestion and acid attack	**Acids and Bases**	Theoretical lectures And discussions	Exam
5	2	calculation of PH	**Hydrogen ion exponent (PH)**	Theoretical lectures And discussions	exam
6	2	Buffer solutions and Buffers in the body (Blood buffers)	**Buffer solutions**	Theoretical lectures And discussions	exam

7	3	Neutralization Titrations, Standard Solutions, Indicators for Acid/Base Titrations, The Common Indicators, Titration Errors	**Acid-Base Titrations**	Theoretical lectures And discussions	exam
8	**20**	**Organic chemistry**		Theoretical lectures And discussions	exam
9	2	Organic chemistry, covalent bonding, electronegativity and bond polarity, structure and properties of organic chemistry, hybrid orbitals(SP3,SP2,SP), Isomerism and stereoisomers	**Introduction in organic chemistry**	Theoretical lectures And discussions	exam
10	2	Structure and stereochemistry of alkanes, nomenclature of alkanes, physical properties of alkanes, cycloalkanes, synthesis of alkanes , reaction of alkanes, free radical reaction of alkanes	**Alkanes**	Theoretical lectures And discussions	exam
11	2	Structure and stereochemistry of alkenes, nomenclature of alkenes, physical properties of alkenes, cycloalkanes, synthesis of alkenes , reaction of alkenes	**Alkenes**	Theoretical lectures And discussions	exam
12	2	Structure and stereochemistry of alkynes, nomenclature of alkynes, physical properties of alkynes, synthesis of alkynes , reaction of alkynes	**Alkynes**	Theoretical lectures And discussions	exam
13	2	Structure of alcohols and phenols, nomenclature of alcohols, names of diols, physical properties of alcohols,	**Alcohols, phenols, Ethers and Thiols**	Theoretical lectures And discussions	exam

		synthesis of alcohols , reaction of alcohols			
14	2	Structure of Carboxylic acid, nomenclature of Ketones and aldehydes, physical properties of Carboxylic acid, synthesis of Carboxylic acid, reaction of Carboxylic acid	**Carboxylic acid, Esters & Thioesters**	Theoretical lectures And discussions	exam
15	2	Structure of Ketones and aldehydes, nomenclature of Ketones and aldehydes, physical properties of Ketones and aldehydes,	**Ketones and aldehydes**	Theoretical lectures And discussions	exam
16	2	Hackle's rule,hetrocyclic aromatic compound, physical properties of benzene and derivatives	**Hydrocarbons aliphatic and aromatic compound**	Theoretical lectures And discussions	exam
17	2	Structure of amines, nomenclature of amines, physical properties of amines, synthesis and reaction of amines	**Amines**	Theoretical lectures And discussions	exam
18	2	Chirality, Asymmetric carbon atoms, chirality center, sterocenter, Diasteromers and Enantiomers, racemic mixtures,	**Stereochemistry**	Theoretical lectures And discussions	exam
19	**10**	**Inorganic chemistry**		Theoretical lectures And discussions	exam
20	2	Introduction, Isotopes, alpha, beta, gamma radiation, Half-life, Radiation risks, Radiation measurements and units	Theoretical lectures And discussions	Theoretical lectures And discussions	exam

21		**Ions in living system and: their importance**		Theoretical lectures And discussions	exam
22	2	Aerosole, Smoke, Hydrocarbons pollution, Pollution due to hospitals and Industries, Physiological effects of chemical materials on living system, Prevention and cure of air pollution	**Air pollution**	Theoretical lectures And discussions	exam
23	2	Colloids and Their Properties, Emulsions, Emulsifying Agents	**Colloids**	Theoretical lectures And discussions	exam
24	2	**Chemical bonding**		Theoretical lectures And discussions	exam
25	44	**Biochemistry**		Theoretical lectures And discussions	exam
26	3	Common carbohydrates and classification of carbohydrates	Theoretical lectures And discussions	Theoretical lectures And discussions	exam
27	3	Monosaccharaides, Disaccharides, Oligosaccharides, and Polysaccharides	**Carbohydrates**	Theoretical lectures And discussions	exam
28	3	Amino acid: structure and classification.	**Amino acids**	Theoretical lectures And discussions	exam
29	3	Zwitterions and Isoelectric point	**Amino acids**	Theoretical lectures And discussions	exam

30	3	Definition, structure and classification of lipids Function of lipids and fatty acid	**Lipids**	Theoretical lectures And discussions	exam
31	3	Definition, structure and classification of lipids Function of lipids and fatty acid	**Lipids**	Theoretical lectures And discussions	exam
32	**3**	**Nucleotide**		Theoretical lectures And discussions	exam
33	**3**	Chemical characterization of DNA and RNA, nucleoside and nucleotides	**Nucleic acids**	Theoretical lectures And discussions	exam
34	4	Definition, Mechanisms ,nomenclature and function	**Enzymes**	Theoretical lectures And discussions	exam
35	4	Definition, Classification, Chemistry, and function	**Vitamin**	Theoretical lectures And discussions	exam
36	4	Definition, structure and function	**Hemoglobin and porphyrins**	Theoretical lectures And discussions	exam
37	**3**	Definition, Type and function	**Plasma protein**	Theoretical lectures And discussions	exam
38	3	Chemical composition and structure of membranes - Transport across membranes - Passive diffusion, Facilitated diffusion and Active transport. transport.	**Biological Membranes and Transport**	Theoretical lectures And discussions	exam

The structure of the course for practical medical chemistry /first academic level / first course				
Week	**Required educational goals**	**Unit name and/or topic**	**Evaluation method**	**Education method**
1st week	General laboratory apparatuses, safety procedures & first aid		lecture Scientific application in the laboratory	exam
2nd week	Acid-base titration		lecture Scientific application in the laboratory	exam
3rd week	The standardization of basic solutions		lecture Scientific application in the laboratory	exam
4th week	Quantitative Estimation Titration Analysis		lecture Scientific application in the laboratory	exam
5th week	PH & PH meter Osmosis & dialysis Preparation of some colloids		lecture Scientific application in the laboratory	exam
6th week	General urine examination		lecture Scientific application in the laboratory	exam
7th week	Chromatography for amino acid		lecture	exam

	separation		Scientific application in the laboratory	
8th week	Carbohydrate test, 1-Molish , 2-Benedict		lecture Scientific application in the laboratory	exam
9th week	Carbohydrate test 1-Barfoed , 2-Bial		lecture Scientific application in the laboratory	exam
10th week	Carbohydrate test 1-Seliwannof's		lecture Scientific application in the laboratory	exam
11th week	Hydrolysis of disaccharide (sucrose) to monosaccharide by using： 1-Enzyme like: lactase, maltase, sucrose 2-Acid like: HCl or CH3COOH		lecture Scientific application in the laboratory	exam
12th week	The general test for polysaccharide by using 1-iodine test. 2- Hydrolysis of polysaccharide by Enzyme and Acid.		lecture Scientific application in the laboratory	exam
13th week	1-Qualitative test of protein . Ninhydrin test. 2-Biuret test		lecture Scientific application	exam

			in the laboratory	
14th week	1-Millon's test 2-Xanthoprotic test 3-Lead acetate test (Lead sulfide test)		lecture Scientific application in the laboratory	exam
15th week	Revision & Discussions		lecture Scientific application in the laboratory	exam
16th week	Study the importance of proteins and how to identify them using chemical test. 1-Hopkin's Cole Test 2-The Sakaguchi Test		lecture Scientific application in the laboratory	exam
17th week	Tests for lipids 1-Grease stain test :2- Iodine test:		lecture Scientific application in the laboratory	exam
18th week	Reaction test 2- Copper acetate Tests for lipids:-١ test:		lecture Scientific application in the laboratory	exam
19th week	Tests for lipids 1-Emulsification of Oils 2-Tests for cholesterol A-Salkowski test B-Liebermann-Burchard test:		lecture Scientific application in the laboratory	exam
20th week	Collection and handling of Sample		lecture Scientific application in the	exam

			laboratory	
21th week	Estimation of Vit-D in blood		lecture Scientific application in the laboratory	exam
22th week	Estimation of Vit-C in blood		lecture Scientific application in the laboratory	exam
23th week	Hemoglobin tes		lecture Scientific application in the laboratory	exam
24th week	Estimation of iron		lecture Scientific application in the laboratory	exam
25th week	Estimation of albumin		lecture Scientific application in the laboratory	exam
26th week	Estimation of gamma globulin in the serum		lecture Scientific application in the laboratory	exam
27th week	Estimation of Amylase in Serum		lecture Scientific application in the laboratory	exam
28th week	Estimation of lipase in serum		lecture	exam

			Scientific application in the laboratory	
29th week	Qis		lecture Scientific application in the laboratory	exam
30th week	Revision & Discussions		lecture Scientific application in the laboratory	exam

11.Cours Evaluation
- Daily exams. - Evaluating the performance of conducting practical experiments in the laboratory. - The student's scientific and practical ability to solve health problems. - Reports preparation - Mid-course exam. - End of course exam.

12. Learning and Teaching Resources	
Required textbooks (curricular book , if any) :	-Harper's Illustrated Biochemistry (31st Edition). -Lippincott Illustrated Reviews: Biochemistry, Seventh Edition, 2018.
Main references (source)	- Basic Medical Biochemistry (4st Edition). - Lehninger Principles of Biochemistry (7st Edition).
Recommended book and references (scientific journals, reports …….)	Scientific journals in clinical biochemistry.
Electronic References , Website…	The website of the Faculty of Medicine in addition to the Internet.

Course Description Form Biochemistry

1. **Course Name:**
Medical Biochemistry
2. Course Code:
Bioc205
3. Semester / Year:
2026 – 2025
4. Description Preparation Date:
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
150 hours [90 hours (theoretical), 60 hours (practical)] / **8 units**
7. Course administrator's name (mention all, if more than one name)
Assist Prof. Dr. qayssar abd alhusain **Email:** qayssarabdulhussein@uos.edu.iq **Lec.** Dr muhaned karem **Email: mohanad.karim@uos.edu.iq** **Lec.husain flih** **Email hussein.faleih@uos.edu.iq**

8. Course Objectives	
Course Objectives	• Preparing scientifically and practically competent students in the fields of medical and clinical chemistry. • Understanding the basics of biochemical variables that occur in the case of disease, linking them clinically, and accurately diagnosing them • Follow modern methods in pathological analysis techniques to obtain accurate results, qualify graduates scientifically and professionally, prepare competent researchers in clinical medical fields, and find solutions for health problems.
9. Teaching and Learning Strategies	
Strategy	• Theoretical lectures. • Conducting experiments in special practical laboratories. • Teaching small groups. • Field visits to hospitals and health centers. • Display educational videos and images of clinical cases related to biochemical disorders within the human body.

10. Course Structure

The structure of the course for theoretical Biochemistry / second academic level

Week	Hours	Required educational goals	Unit name and/or topic	Evaluation method	education method
1	8	Digestion and Absorption		Theoretical lectures And discussions	exam
2	8	Vitamins		Theoretical lectures And discussions	Exam
3	4	Cell and Cell membrane		Theoretical lectures And discussions	Exam
4	10	Hormones		Theoretical lectures And discussions	Exam
5	4	Diagnostic Enzymology		Theoretical lectures And discussions	exam
6	14	Carbohydrate metabolism		Theoretical lectures And discussions	exam
7	12	Amino acid &proteins metabolism		Theoretical lectures And discussions	exam
8	12	Lipids metabolism		Theoretical lectures And discussions	exam

9	2	Biological oxidation		Theoretical lectures And discussions	exam
10	5	Biliruben Metabolism and Jaundice		Theoretical lectures And discussions	exam
11	7	Nucleic acids metabolism		Theoretical lectures And discussions	exam
12	7	Trace elements and Minerals		Theoretical lectures And discussions	exam
13	4	Liver function, kidney function, clinical enzymology		Theoretical lectures And discussions	exam
14	5	Purine and Pyrimidine metabolism		Theoretical lectures And discussions	exam

11.Cours Evaluation	
- Daily exams. - Evaluating the performance of conducting practical experiments in the laboratory. - The student's scientific and practical ability to solve health problems. - Reports preparation - Mid-course exam. - End of course exam.	
12. Learning and Teaching Resources	
Required textbooks (curricular book , if any) :	-Harper's Illustrated Biochemistry (31st Edition). -Lippincott Illustrated Reviews: Biochemistry, Seventh Edition, 2018.
Main references (source)	- Basic Medical Biochemistry (4st Edition). - Lehninger Principles of Biochemistry (7st Edition).
Recommended book and references (scientific journals, reports …….)	Scientific journals in clinical biochemistry.
Electronic References , Website…	The website of the Faculty of Medicine in addition to the Internet.

Description Form for Family and Community Medicine

1. **Course Name:**
Community Medicine
2. **Course Code:**
Com304
3. **Semester / Year:**
2025/2026
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
Total number of hours: 30 theoretical hours + 30 practical hours
7. Course administrator's name (mention all, if more than one name)
Assist .Prof. Dr marwa jabar e-mail: marwajabbar@uos.edu.iq Lec.dr layla aoun e mail laila.aoun@uos.edu.iq
8.Course Objective

Course Objectives	• Providing students with special skills to know the health problems that society suffers from, their causes, how diseases are distributed and the influence of various factors in them, and to know the most appropriate ways and means to solve these problems. • Providing students with basic skills to perform various statistical tests. • Providing students with the skills to measure the nutritional status of the population.
9. Teaching and Learning Strategies	
Strategy	Giving theoretical lectures. Special practical laboratories to gain skills in solving statistical problems. Laboratory of application of nutritional measurements. Practical and clinical training in hospitals and health centers. Field training to various relevant institutions.

	Integrated, in-person and e-learning (via the Classroom platform). Seminars and weekly discussion groups. Small group discussion and suggestion of solutions to individuals and community problems.

10. Course Structure (third academic level)					
Week	Hours	Required Learning Outcomes	Unit or Subject Name	Learning Method	Evaluation Method
1	1	Introduction to medical statistics	Medical Statistics	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
2	2	Summarization and presentation of data	Medical Statistics	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
3	1	Measurement of central location	Medical Statistics	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
4	1	Measurement of variability	Medical Statistics	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
5	1	Introduction to sampling	Medical Statistics	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
6	1	The normal distribution and its characteristics	Medical Statistics	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)

7	1	The confidence interval and limit	Medical Statistics	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
8	3	Tests of significance: the Z test, the t test, and the X^2 test	Medical Statistics	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
9	4	The concept of community diagnosis as an application of statistics in measuring population health	Medical Statistics	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
10	1	Definition of relevant terms	**Public Health Nutrition**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
11	3	Nutrient metabolism and requirements	**Public Health Nutrition**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
12	3	Nutrition and infection	**Public Health Nutrition**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
13	**2**	Nutrition of specific groups of population	**Public Health Nutrition**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
14	2	Nutritional surveys and assessment of nutritional status of population	**Public Health Nutrition**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
15	3	Selected Nutritional diseases	**Public Health Nutrition**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)

16	3	Diet therapy and nutritional rehabilitation	**Public Health Nutrition**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)

14.Cours Evaluation	
1- Mid-course and final exams. 2- Pop quizzes. 3- Score for exercises. 4- Oral, practical and clinical examinations. 5- Reports.	
15. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Biostatistics: A Foundation for Analysis in the Health Sciences, Daniel, Wayne W. Human Nutrition Basic Epidemiology Infectious Diseases ICD-11 Textbook of Occupational Medicine Practice Textbook of Clinical Occupational and Environmental Medicine Primary Health Care: Theory and Practice
Main references (source)	Community Public Health in Policy and Practice Community Health Worker's Sourcebook Integrating health in urban and territorial planning Fundamentals Biostatistics
Recommended book and references (scientific journals, reports …….)	Journal of Community Nutrition & Health Journal of Community Health Research Journal of School of Public Health and Institute of Public Health Research

	Journal of Family and Community Medicine Safety Science Scandinavian Journal of Work, Environment and Health Annual Review of Nutrition
Electronic references, websites	WHO website CDC website The United States National Library of Medicine American Public Health Association

Description Form for Community Medicine fourth stage

1. **Course Name:**	
Community MedicineII	
2. **Course Code:**	
Cmed406	
3. **Semester / Year:**	
2025/2026	
4. **Description Preparation Date:**	
2026	
5. Available Attendance Forms:	
Mandatory attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Total number of hours: 105 theoretical hours + 120 practical hours	
7. Course administrator's name (mention all, if more than one name)	
Assist .Prof. Dr jafer sadic jaffer e-mail: jaafar.sadiq@uos.edu.iq Lec.dr israa dheaa e mail israadheyaa@uos.edu.iq	
8.Course Objective	
Course Objectives	• Providing students with special skills to know the health problems that society suffers from, their causes, how diseases are distributed and the influence of various factors in them, and to know the most appropriate ways and means to solve these problems. • Providing students with basic skills to perform various statistical tests. • Providing students with the skills to measure the nutritional status of the population.
9. Teaching and Learning Strategies	

Strategy	Giving theoretical lectures. Special practical laboratories to gain skills in solving statistical problems. Laboratory of application of nutritional measurements. Practical and clinical training in hospitals and health centers. Field training to various relevant institutions.
	Integrated, in-person and e-learning (via the Classroom platform). Seminars and weekly discussion groups. Small group discussion and suggestion of solutions to individuals and community problems.

10. Course Structure (fourth academic level)					
Week	Hours	Required Learning Outcomes	Unit or Subject Name	Learning Method	Evaluation Method
1.	2	Introduction : concept of health and disease, definition of epidemiology, epidemiological uses and approaches	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
2.	1	Epidemiological data: types, sources and limitations	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
3.	2	Epidemiological measurements : rates, proportions and ratios	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
4.	2	Descriptive epidemiology: person, place and time	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
5.	1	Descriptive epidemiological Cross-sectional, ıdinal, Case control, Cohort, ıtional	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)

6.	1	The concept of association, causation, risk	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
7.	2	Analytical epidemiological studies	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
8.	2	screening and quality control of screening and diagnostic tests- clinical epidemiology	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
9.	1	Designing epidemiological studies	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
10.	1	The concept and investigation of epidemic	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
11.	1	definition of terms	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
12.	7	infections acquired through the gastrointestinal tract:	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
13.	1	Diarrheal diseases: extent of the problem, causes, risk factors and control	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
14.	1	Comparative epidemiology of rotavirus, salmonella, cholera and shigellosis	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
15.	1	Amoebiasis and shigellosis	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)

16.	1	Bacterial food poisoning	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
17.	1	Poliomyelitis	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
18.	1	Infections hepatitis A	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
19.	1	Typhoid and paratyphoid fever	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
20.	9	- infections acquired through the respiratory system (air borne infections):	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
21.	2	Acute respiratory infection (ARI): extent, causes, risk factors and strategies of control of ARI	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
22.	2	Exanthematous infection: Measles, german measles, chicken pox…etc	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
23.	2	Mouth and throat infection: Diphtheria, mumps, and tonsillitis	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
24.	1	Whooping cough	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
25.	1	Tuberculosis	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)

26.	1	Acute bacterial meningitis	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
27.	8	percutaneous infection: infections acquired through skin	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
28.	2	insect bites: malaria, leishmaniasis, rickettsia	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
29.	1	Abrasions: anthrax	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
30.	1	animal bites, rabies	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
31.	1	wounds: tetanus	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
32.	1	injections: hepatitis B, AIDS	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
33.	1	Penetration: Schistosomiasis, hookworm	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
34.	2	-sexually transmitted diseases	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
35.	2	- zoonotic infections	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)

36.	1	- Nosocomial infections and traveller health	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
37.	2	Epidemiology of ischemic heart diseases	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
38.	2	Epidemiology of diabetes mellitus	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
39.	2	Epidemiology of cancer	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
40.	2	Epidemiology of accidents	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
41.	2	Epidemiology of mental health and geriatrics	Epidemiological	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
42.	1	Introduction to MCH care	**Maternal and child health care**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
43.	2	Components of MCH care	**Maternal and child health care**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
44.	1	Nutrition during pregnancy	**Maternal and child health care**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
45.	1	Infection during pregnancy	**Maternal and child health care**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)

46.	1	Low birth weight and prematurity	**Maternal and child health care**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
47.	1	Evaluation of MCH care	**Maternal and child health care**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
48.	1	under five clinics	**Health care for children**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
49.	1	growth monitoring	**Health care for children**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
50.	1	Immunization	**Health care for children**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
51.	1	Development clinics	**Health care for children**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
52.	1	care for handicapped children	**Health care for children**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
53.	2	School health services: concept and plans	**Health care for children**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
54.	1	Vital statistics in MCH care	**Health care for children**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
55.	1	Definition of health and disease within the context of environment, and environmental health	**Environmental health**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)

		Basic activities of environmental health			
56.	1	Water: sources, quality and related diseases	**Environmental health**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
57.	2	Air: sources of pollution, health effects and control of air pollution	**Environmental health**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
58.	1	Toxicology: Common environmental problems	**Environmental health**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
59.	1	Definition of occupational health Objective of occupational health services	**Occupational health**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
60.	1	Health hazards associated with work	**Occupational health**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
61.	1	Health hazards to the environment and community which result from industrial activities	**Occupational health**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
62.	1	Safety measures in occupation	**Occupational health**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
63.	1	Selected occupational diseases	**Occupational health**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)

64.	1	Limitation of the hospital model/Justifications for PHC	**Primary health care (PHC) in Iraq**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
65.	2	Definition, contents and difficulties of PHC/ Supportive programmes/ The five star doctor	**Primary health care (PHC) in Iraq**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
66.	1	National PHC programmes: EPI, CDD	**Primary health care (PHC) in Iraq**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
67.	1	National PHC programmes: ARI, MCH, Breast feeding	**Primary health care (PHC) in Iraq**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
68.	1	Brief historical view of Iraq health system	**Healthcare administration**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
69.	1	Concept of administration	**Healthcare administration**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
70.	1	Planning of health care services	**Healthcare administration**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)
71.	2	Evaluation of health care services	**Healthcare administration**	Discussions, theory lectures & practical sessions	Discussions, reports, quizzes, and examinations (theory & practical)

14.Cours Evaluation	
6- Mid-course and final exams. 7- Pop quizzes. 8- Score for exercises. 9- Oral, practical and clinical examinations. 10- Reports.	
15. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Biostatistics: A Foundation for Analysis in the Health Sciences, Daniel, Wayne W. Human Nutrition Basic Epidemiology Infectious Diseases ICD-11 Textbook of Occupational Medicine Practice Textbook of Clinical Occupational and Environmental Medicine Primary Health Care: Theory and Practice
Main references (source)	Community Public Health in Policy and Practice Community Health Worker's Sourcebook Integrating health in urban and territorial planning Fundamentals Biostatistics
Recommended book and references (scientific journals, reports …….)	Journal of Community Nutrition & Health Journal of Community Health Research Journal of School of Public Health and Institute of Public Health Research
	Journal of Family and Community Medicine Safety Science Scandinavian Journal of Work, Environment and Health Annual Review of Nutrition
Electronic references, websites	WHO website CDC website The United States National Library of Medicine American Public Health Association

Description Form for Pharmacology

1. **Course Name:**
Pharmacology
2. **Course Code:**
PHA302
3. **Semester / Year:**
2025\2026
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
Total number of hours: 90theoretical hours +60practical hours (8 units)
7. Course administrator's name (mention all, if more than one name)
Name: prof .drhatim abd alkareem Emial dr.hatim77@uos.edu.iq
8. Course Objectives

Course Objectives	• Providing students with special skills to know the health problems that society suffers from, their causes, how diseases are distributed and the influence of various factors in them, and to know the most appropriate ways and means to solve these problems. • Providing students with basic skills to perform various statistical tests. Providing students with the skills to measure the nutritional status of the population
9. Teaching and Learning Strategies	
Strategy	Giving theoretical lectures. Special practical laboratories to gain skills in solving statistical problems. Laboratory of application of nutritional measurements. Practical and clinical training in hospitals and health centers. Field training to various relevant institutions. Integrated, in-person and e-learning (via the Classroom platform). Seminars and weekly discussion groups. Small group discussion and suggestion of solutions to individuals and community problems.

10.Course Structure				
Week	**Hours**	**Unit or subject name**	**Learning method**	**Evaluation method**
1.	**1**	**Introduction to pharmacology**	Definition of drug ,pharmacodynamic, pharmacokinetic, Toxicology, clinical pharmacology, therapeutic, pharmacogentics.	Exam
2.	**2**	**Pharmacokinetics**	Definition ;drug passage across cell membrane Order of p/k. process, half life, SSC, bioavailability, first-pass effect, Vd., protein binding, result of metabolism, phases of metabolism, enzyme-induction and inhibition, excretion; renal, pulmonary, fecal, milk	Exam
3.	**2**	**Pharmacodynamic**	The biochemical and physical mechanism of drug action on body ;Receptor interactions , Competitive and non competitive inhibition ;Agonist-antagonist –receptor complex ,Dose – response(potency),Therapeutic index (TI) .	Exam
4.	**4**	**Cholinergic nervous system**	Anatomy of autonomic nervous system ; sites of Ach. action; cholinomimetic drugs, cholinesterase inhibitors ,antimuscarinic drugs; Atropine as a prototype ,Atropine like	Exam

			drugs ,organophosphorus compounds poisoning .	
5.	**4**	**Adrenergic nervous system**	Catecholamines, biosynthesis and metabolism Adrenergic agonists (alpha and beta);Therapeutic uses of sympathomimetic drugs . Adrenergic blockers; selectivity of adrenergic blocking ,classification of alpha and beta adrenoceptors blockers .	Exam
6.	**2**	**Autocoids**	Definition of autacoids, Histamine and anti histamine H1 and H2 blockers. Serotonin (5HT) and its antagonist ;prostaglandins ,drugs act via prostaglandins inhibition.	Exam
7.	2- **Central nervous system**			
8.	**1**	**Ant anxiety and hypnotic drugs**	Definition. Benzodiazepines as Diazepam, Benzodiazepines antagonist as Flumazenil. Other drugs like beta-blockers and antihistamines in anxiety .	Exam
9.	**1**	**Antipsychotic drugs**	Definition of psychosis and dopamine hypothesis of schizophrenia ,classification of antipsychotic drugs ,pharmacological action of antipsychotic	Exam

			,therapeutic indications and side effects .	
10.	**2**	**General anesthetics**	Definition ,classification, inhalational and intravenous anesthetics, advantages , disadvantages, clinical uses and side effects .	Exam
11.	**2**	**Antiepileptic drugs**	Definition and general classification of epilepsy, main antiepileptic drugs like Phenytoin, Carbamazepine, Sodium valproate , the newer drugs as Vigabatrin ,lamotrigine, gabapentin and Topiramete .	Exam
12.	**1**	**Local anesthetics**	Types of local anesthesia ,Mechanism of action ,Lidocaine as a prototype ,methods of prolongation of duration of action of LA.	Exam
13.	**2**	**Antidepressant drugs**	Definition and classification of depression ;classification of antidepressant drugs like Tricyclic group like Imipramine, Amitriptyline, Clomipramine, mechanism of action ,clinical uses, side effects ,SSRIs group like Fluoxetine , MAO inhibitors ,Lithium, clinical use and side effects .	Exam
14.	**1**	**Anti Parkinsonian drugs**	Definition of Parkinson disease and pathophysiology	Exam

			,cholinergic and dopaminergic mechanism in Parkinson disease ,drugs useful in disease ;L-dopa, decarboxylase inhibitors ,dopamine agonists as Bromocriptine .	
15.	**1**	**Ethanol pharmacology**	Metabolism and pharmacological action of ethanol ,acute and chronic action of Ethanol, interaction with other drugs .	Exam
16.	**2**	**NSAIDs**	Classification ,COX1-inhibitors such as salicylates, Ibuprofen, Indomethacin, COX2- inhibitors like Celecoxib. Differences between COX1 and COX2 . other uses of NSAIDs with mechanism of action such as Aspirin and Paracetamol.	Exam
17.	**2**	**Opioids analgesics**	Narcotic: endogenous enkephalins and endorphins ,Opiates receptors ,mechanism of action of narcotic analgesics, Morphine as a prototype drug .other like Pethidine ,Codeine ,Methadone, Tramadol and Propoxyphene. Opiate antagonists : Naloxone and Nalorphine	Exam
18.	**1**	**Anti rheumatic drugs**	Aims of treatment of rheumatoid arthritis ,disease	Exam

			modifying drugs ,role of corticosteroids in rheumatoid arthritis .	
19.	**1**	**Drugs used for gout**	Drugs useful in acute attack of gout :NSAIDs and Colchicines, drugs useful in chronic gout :- Probencid and Allopurinol.	Exam
20.	**1**	**Ganglionic and neuromuscular blockers**	Neuromuscular transmission .classification of muscle relaxants into depolarizing and non depolarizing agents .peripherally and centrally acting muscle relaxants :Dantroline ,Baclofen, and Benzodiazepines .	Exam
21.	**3**	**3- Drugs acting on respiratory tract**	Bronchodilators :beta 2 stimulants ,xanthine derivatives ,mast cell stabilizers :Sodium cromoglycate and ketotifen .Mucolytics and expectorants .Mechanism of cough and cough suppressants .	Exam
22.	**3**	**4- Drugs acting on GIT**	Antacids, anti ulcer drugs include :H2- blockers ,proton pump inhibitors ,Sucralfate ,bismuth chelate ,prostaglandins analogues as misoprostol, laxatives and purgatives ,antidiarrhoeal drugs ;antiemetic drugs like Metoclopramide and	Exam

			domperidone. Drugs useful in ulcerative colitis and drugs for dissolution of gall stones .	
23.	**3**	5- **Drug acting on urinary system**	Renal handling of water and electrolytes .Diuretics ; mode and site of action ;classification and clinical uses .	Exam
24.	25. 3	6- **Drugs acting on cardiovascular system**	6- **Drugs acting on cardiovascular system**	Exam
26.	2	**Anti hypertensive drugs**	Definition of hypertension ,factors regulating blood pressure; classification of anti hypertensive drugs :-Diuretics ,centrally acting drugs , calcium channels blockers and angiotensin converting enzyme inhibitors ,angiotensin-2-receptors blockers ,beta blockers , non-pharmacological treatment of hypertension	Exam
27.	2	**Drugs used to treat ischemic heart diseases**	Definition of angina pectoris ;Nitrates, pharmacological features of GTN; mechanism of action; rout of drug administration side effects and tolerance . other drugs useful in treatment of angina as calcium channel blockers and beta blockers ,role of anti- plate let in angina .	Exam
28.	**2**	**Drugs used to treat heart failure**	Pathophysiology of heart failure ;cardiac glycosides	Exam

			;pharmacology of Digoxin as a prototype drug ;other drugs like vasodilators ,and ACE inhibitors in heart failure ;New inotropic drugs as Amrinone and Milrinone.	
29.	**3**	**Antiarrhythmic drugs**	Pathophysiology of cardiac arrhythmias; types of arrhythmias ;classification of anti arrhythmic drugs .pharmacology of lignocaine ;Procainamide ;Quinidine ;Disopyramide ,beta-blockers and calcium channel blockers .	Exam
30.	**2**	**Anticoagulant drugs**	Blood coagulation process . Heparin; unfractionated (UFH)and low molecular weight heparin(LMWH):mechanism of action , p/k. ; clinical uses and side effects ;Advantages of the use of LMWH on UFH. plate let aggregation inhibitors ; Clopidogrel; thrombolytic agents and dugs acting on the plate lets ;Vitamin K preparation and Aminocaproaic acid .	Exam
31.	**2**	**Fibrinolytic, antifibrolytic and ant platelets drugs**	Physiology of plate let adhesion and aggregation (thrombus formation), anti plate let aggregation as Aspirin, Abciximab, Tirofiban ,plasminogen activators as	Exam

			Streptokinase,Alteplase,Anistrepl aes.	
32.	**2**	**Anti anemic and vitamins**	Iron preparations, indications and adverse effects , folic acid ,and V itaminb12 ,Haemopoietic growth factors.	Exam
33.	**2**	**Hypolipidemic drugs**	Statins, Cholestyramine, Nicotinic acid , Gemfibrozil .	Exam
34. 7- Chemotherapeutic drugs				
35.	**5**	**Antibacterial drugs**	Definition and introduction to antimicrobial agents ,mechanism of action and resistant to antimicrobial drugs (Penicillin, cephalosporins first to fourth generations), Vancomycin, Sulphonamides and urinary tract antiseptic , Aminoglycosides , Macrolides as Erythromycin, Clindamycin, Tetracyclines , Fusidic acid, Chloramphenicol and Quinolones .	Exam
36.	**1**	**Anti tuberculosis**	Definition ; classification ,first and second line drugs ,Rifampicin, Isoniazid Ethambutol, Cycloserine, Para - aminosalicylic acid ,and Streptomycin .	Exam
37.	**2**	**Anthelminthic drugs**	Classification of worms ,classification of anthelmintic drugs, mechanism of action and side effects ,broad	Exam

			spectrum anthelmintic ,Albendazole ,Mebendazole ,Pyrantel pamoate Piperazine ,Thialbendazole ,Ivermectin .	
38.	**1**	**Antifungal drugs**	Local and systemic anti fungal drugs , Amphotericin , Griseoflvin, Nystatin and Flucytosine .	Exam
39.	**2**	**Ant protozoa drugs**	Metronidazole ,Diloxanide furoate, Chloroquine ,Iodoquinol; Emetine .	Exam
40.	**1**	**Antimalarial drugs**	Definition ;life cycle of malarial parasite; classification of anti malarial drugs ;Chloroquine, Quinine ,Primaquine, Mefloquine ,Artemisinin, possible mechanism of action and side effects ; Antimalarial drugs and G6PDD .	Exam
41.	**1**	**Antiviral drugs**	Why it is difficult to treat viral infection ;classification of anti viral drugs according to mechanism and site of action ;Acyclovir, anti retroviral agents as Zidovudine, Lamivudine and stavudine ; protease inhibitors as Indinavir, Ritinovir ;Antiinfluenza agents as Amantadine ,Rimatadine, and Osdeltamivir .	Exam
42.	**3**	**Cancer chemotherapy**	Classification of cytotoxic drugs	Exam

			.mechanism of action ,clinical uses and adverse effects .	
43. 8- Hormones			**8- Hormones**	
44.	**2**	**Corticosteroids**	Pharmacological action of steroids ,different preparations ,clinical uses , adverse effects , differences between glucocorticoids and mineralocorticoides .	Exam
45.	**2**	**Insulin and oral hypoglycemic drugs**	Definition and clinical features, Insulin; action and different preparations ,side effects ; oral hypoglycemic drugs ;Sulphonylureas ,Biguanides , meglitinides , thiazolidindiones and alpha-glucosidase inhibitors .	Exam
46.	**1**	**Thyroid hormones and ant thyroid drugs**	Thyroid hormones, biosynthesis And pharmacological actions ,Carbimazole and Propylthiouracil ,the use of radio-active iodine .	Exam
47.	**1**	**Drugs acting on uterus**	Oxytocin and Ergometrine ,pharmacology and mode of action ,clinical uses ,prostaglandins as abortant drugs .	Exam
48.	**2**	**Sex hormones and contraceptives**	Oral contraceptive pills types ,pharmacological actions and clinical uses ,adverse effects and contraindications .	Exam
49.	**1**	**Androgens and anti androgens**	Pharmacological action, clinical	Exam

			uses and side effects of androgens ,anti androgens .	
50. 9- Selective topics				
51.	**3**	**General toxicology**	Heavy metal poisoning ,Thallium poisoning ,the use of chelating agents ,activated charcoal .	Exam
52.	**1**	**Skin pharmacology**	Principle of treating skin diseases, dermatological preparations , percutaneous absorption .	Exam
53.	**1**	**Immune- pharmacology**	Indication of immunosuppressant ;ciclosporin, tacrolimus, corticosteroids , cytotoxic drugs as Azathioprine ,cyclophosphamide , monoclonal antibodies as basiliximab and anti lymphocytic immunoglobulin.	Exam
54.	**1**	**Drug interaction**	Definition ; types of interactions ,harmful and useful ,antagonism, synergism , interaction of drugs with food.	Exam

11.Cours Evaluation

Mid-course and final exams.
2- Pop quizzes.
3- Score for exercises.
4- Oral, practical and clinical examinations.
5- Reports

12. Learning and Teaching Resources

Required textbooks (curricular book , if any) Lippincott Illustrated Review of Pharmacology
Main references (source)
- Recommended book and references (scientific journals , reports …….) - Katzung Basic and Clinical Pharmacology **Rang and Dale Clinical Pharmacology**
Electronic References , Website www.drugs.com **www.Pubmed.com**

Course Description Form for Behavior science

1. **Course Name:**
Behavior science
2. Course Code:
Behave 404
3. Semester / Year:
2025-2026
4. Description Preparation Date:
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours theoretical (2 units)
7. Course administrator's name (mention all, if more than one name)
Name: Ass. Prof. Dr.marwa jabar marwajabbar@uos.edu.iq
8. Course Objective

Course Objectives	✓ Belief in Patient Potential – Recognizing that behavior change is possible with the right support. ✓ Patience & Persistence – Understanding that behavior change takes time and setbacks are part of the process. ✓ Encouragement & Motivation – Supporting patients in achieving their health goals. ✓ Confidentiality & Trustworthiness – Maintaining patient confidentiality and ethical standards. ✓ Responsibility & Accountability – Taking responsibility for patient outcomes and behavioral interventions. ✓ Commitment to Holistic Care – Addressing psychological and behavioral aspects alongside physical health.

9. Teaching and Learning Strategies	
Strategy	✓ Small scientific circles.

	✓ Discussions. ✓ Seminars. ✓ In-person and electronic blended education (via the Classroom platform).

11. Structure of Behavior science /fourth academic level					
Week	Hours	**Required educational goals**	**Unit name and/or topic**	**Education method**	**Evaluation method**
1.	1.	Defining the concept of personality and approaches to it	personality	Lecture	Exam
2.	2.	How variable components of personality is developed And psychosexual development	Psychoanalytic view of personality	Lecture	Exam
3.	3.	Definition, sense organs, consistency and down top processing	perception	Lecture	Exam
4.	4.	Introduce students to the fundamentals and concepts of social psychology	Social psychology	Lecture	Exam
5.	5.	Definition, function and formation	attitudes	Lecture	Exam
6.	6.	Definition, theory and clinical implications	emotion	Lecture	Exam
7.	7.	Types ,creative thinking, concret thinking, neurological net work	thinking	Lecture	Exam
8.	8.	Definition ,classification, biological basis	memory	Lecture	Exam
9.	9.	Classification, definition, satisfaction and basic needs	Basic motives	Lecture	Exam
10.	10.	Stages, approaches and tasks	Human development	Lecture	Exam

11.	11.	Background,types,application and clinical uses	Neuropsychiatric tests	Lecture	Exam
12.	12.	Theories, types, implications	Patient doctor relation	Lecture	Exam
13.	13.	Basis, types and implications	Communication skills	Lecture	Exam
14.	14.	Definition, types, statistics	Normality concept	Lecture	Exam
15.	15.	Background, components, clinical implication	Sick role and illness behavior	Lecture	Exam
16.	16.	Receptors, neurotransmitters, synapsis	neurochemistry	Lecture	Exam
17.	17.	Dopamine, adrenaline, metabolism, pathways, functions, dysfunctions	catecholamines	Lecture	Exam
18.	18.	Distribution, metabolism, function and dysfunction	Serotonine,Acetylcholine	Lecture	Exam
19.	19.	Synthesis, receptors, behavioral role	neuropeptides	Lecture	Exam
20.	20.	Basic organization, prefrontal cortex, limbic system, thamus, brain stem	neuroanatomy	Lecture	Exam
21.	21.	EEG,VEP, bio feed back,	neurophysiology	Lecture	Exam
22.	22.	Basic terms, Ego, Id, Superego, structural model, psychoanalysis	Psychoanalytic theory	Lecture	Exam
23.	23.	Assumptions, trail and error, reinforcement, punishment, reward	Learning theory	Lecture	Exam
24.	24.	Modeling, learning by observation	Cognitive behavioral theory	Lecture	Exam
25.	25.	Neuroimaging, bio-chemical evaluation	Evaluation of mental disorders	Lecture	Exam
26.	26.	Introduction, family studies, twin studies, genetics of common mental disorders	Genetics of behavior	Lecture	Exam

27.	27.	Physiology, biology, REM, non-REM, sleep hygiene	Sleep	Lecture	Exam
28.	28.	Principles, antipsychotics, antidepressants, mood stabilizing agents	psychopharmacology	Lecture	Exam
29.	29.	Definition, types, IQ	intelligence	Lecture	Exam
30.	30.	Development, biological correlates, phases	Human sexuality	Lecture	Exam

14.Cours Evaluation

- ✓ Discussion in lectures
- ✓ Mid-course exams and end-of-course exams
- ✓ Periodic evaluation through quizzes
- ✓ Small Education Groups
- ✓ Practical exams
- ✓ Reports.

Description Form for Medical Ethics

1. **Course Name:**
Medical Ethics
2. Course Code:
Ethic407
3. Semester / Year:
2025-2026
4. Description Preparation Date:
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours theoretical (2units)
7. Course administrator's name (mention all, if more than one name)
Name:assist Prof. dr.**marwa jabar** marwajabbar@uos.edu.iq

8. Course Objectives	
Course Objectives	1. Remember that doctors are providers of health care 2. Respect patient autonomy at all times 3. Following the ethical rules protect the doctor as well as the patient **4.** What to do when there is Personal involvement with patients
9. Teaching and Learning Strategies	
Strategies	✓ Small scientific circles. ✓ Discussions. ✓ Seminars. ✓ In-person and electronic blended education (via the Classroom platform).

10- Course Structure/ Medical Ethics				
Week	Hours	**Unit name and/or topic**	**education method**	**evaluation method**
1.	1.	Ethics in general and medical ethics as a subset	Lecture	Exam
2.	2.	Principles of medical ethics: Theoretical background and justification of teaching ethics	Lecture	Exam
3.	3.	Ethics in International declarations	Lecture	Exam
4.	4.	Doctors and community relationship	Lecture	Exam
5.	5.	Ethical consideration in preventive medicine	Lecture	Exam
6.	6.	Medical ethics in historical perspectives	Lecture	Exam
7.	7.	Ethics and research	Lecture	Exam
8.	8.	Doctor and patient relationship	Lecture	Exam
9.	9.	Doctor and colleagues relationship	Lecture	Exam
10.	10.	Ethics in surgical practice	Lecture	Exam
11.	11.	Ethics in Gynecology and obstetrics	Lecture	Exam
12.	12.	Ethics in Pediatrics	Lecture	Exam
13.	13.	Ethics in Psychiatric practice	Lecture	Exam
14.	14.	Ethical consideration in human reproduction	Lecture	Exam
15.	15.	Accountability in practicing medicine	Lecture	Exam
16.	16.	Special problems: Dying patients, surgical separation of twins, Abortion, Refusal of necessary treatment	Lecture	Exam
17.	17.	Optional topics	Lecture	Exam

14.Cours Evaluation

- ✓ Discussion in lectures
- ✓ Mid-course exams and end-of-course exams
- ✓ Periodic evaluation through quizzes
- ✓ Small Education Groups
- ✓ Practical exams
- ✓ Reports

Course Description Form for Dermatology

1. **Course Name:**
Dermatology / FIFTH LEVEL
2. **Course Code:**
DER509
3. **Semester / Year:**
2025/2026
4. **Description Preparation Date:**
2026
5**. Available Attendance Forms:**
Mandatory attendance
6. **Number of Credit Hours (Total) / Number of Units (Total)**
- 30 theoretical hours - 30 practical hours - Total number of units 3
7. Course administrator's name (mention all, if more than one name)
Name: Lec..dr Alaa hamid / Email:
8. Course Objectives
1. To have professional skills to interpret the clinical picture of The common skin diseases, sexualy transmitted diseases and some rare skin disorders and to diagnose them and have intellectual skill to treat them. 2. Watching the pathological cases in the inner halls of the people of Nador, the Echo and the Unit of Psychiatry, Joints and Dermatology.

9. Teaching and Learning Strategies	
Strategy	• Theoretical lectures. • Teaching small groups by making seminars related to the topics. • Show educational videos and pictures related to the parts of the cell and how they divide

10. Course Structure

The structure of the course for theoretical and practice Dermatology /Fifth academic level

Week	Hours	Required learning outcome	Unit or subject name	Learning method	Evaluation method
1.	**1 hrs. theory** **1 hrs. practical**	Prepare the student to deal with skin layers & be ready to study the skin diseases	Anatomy of the skin	Lecture + practical	General question discussion + exam
2.	**1 hrs. theory** **1 hrs. practical**	To teach him how skin diseases can presentd the best ways to reach a correct diagnosis a skin disease,	Diagnosis of skin diseases	Lecture + practical	General question discussion + exam
3.	**1 hrs. theory** **1 hrs. practical**	enables the student to identify the effects iron mental factors on the skin, the risks & the environment & the proper methods of protection from them	dermatosis resulting from physical hazard factors	Lecture + practical	General question discussion + exam
4.	**1 hrs. theory** **1 hrs. practical**	to identify the skin manifestations of the common systemic diseases	Skin in systemic diseases	Lecture + practical	General question discussion + exam
5.	**1 hrs. theory** **1 hrs. practical**	throws light on the most common scaling mitoses which allows the student to cognize them from other diseases.	Papulosquamous disorder	Lecture + practical	General question discussion + exam

6.	**1 hrs. theory 1 hrs. practical**	the student should be able to be familiar with this relatively common condition in our country	psoriasis	Lecture + practical	General question discussion + exam
7.	**1 hrs. theory 1 hrs. practical**	To help the student understand how acne develops, how can we prevent acne induced by drugs & cosmetics, to effectively treat acne & reduce the disfiguring permanent scarring.	Acne vulgaris	Lecture + practical	General question discussion + exam
8.	**1 hrs. theory 1 hrs. practical**	To enable the student recognizing the congenital skin diseases & help educating patients& their families about their prevention	Genodermatosis	Lecture + practical	General question discussion + exam
9.	**1 hrs. theory 1 hrs. practical**	the student should be able to diagnose the common l infections, their method of diagnosis & together with their prevention.	Bacterial infections	Lecture + practical	General question discussion + exam
10.	**1 hrs. theory 1 hrs. practical**	These rare; but still present in our country, by this the student would be familiar with their main feature manifestations, the proper investigations for diagnose & the best regimens of treatment.	Mycobacterial infections	Lecture + practical	General question discussion + exam
11.	**1 hrs. theory 1 hrs. practical**	The students should know: Classification, clinical presentations, complications and management of common viral infections.	Viral infections	Lecture + practical	General question discussion + exam
12.	**1 hrs. theory 1 hrs. practical**	the students should know the Cause, lifecycle, clinical features and treatment outlines and options of common parasitic infestation like scabies, leshmanaisis and pediculosis.	Parasitic infections	Lecture + practical	General question discussion + exam

13.	**1 hrs. theory 1 hrs. practical**	students should know: Definition and classification of dermatitis, general clinical features in all types of eczema and Common complications and general treatment outlines of dermatitis.	Eczema and dermatitis	Lecture + practical	General question discussion + exam
14.	**1 hrs. theory 1 hrs. practical**	students should know the Classification, level of separation, and responsible antigen(s) of the major autoimmune bullous skin diseases	Autoimmune bullous diseases	Lecture + practical	General question discussion + exam
15.	**1 hrs. theory 1 hrs. practical**	students should know the Types of hair and phases of hair cycle and Causes and clinical presentations of scarring and non-scarring alopecia.	Hair problems	Lecture + practical	General question discussion + exam
16.	**1 hrs. theory 1 hrs. practical**	students should know the Components of the nail unit and common nail disorder	Diseases of nail	Lecture + practical	General question discussion + exam
17.	**1 hrs. theory 1 hrs. practical**	To make the student able to make a diagnosis of yeast infections by knowing the distinguishing features of each one	Yeast infections	Lecture + practical	General question discussion + exam
18.	**1 hrs. theory 1 hrs. practical**	To enable the students to list the dermatophyte infection In differential diagnosis of annular lesions	Fungal dermatophytosis	Lecture + practical	General question discussion + exam
19.	**1 hrs. theory 1 hrs. practical**	To make the student familial with a such diseases and how to deal with it and differentiated from other problems	Connective tissue diseases	Lecture + practical	General question discussion + exam

20.	**1 hrs. theory 1 hrs. practical**	To make the students familiar with clinical features of urticaria 2.To enable the students recognize the warning features of life-threatening urticaria	Urticaria	Lecture + practical	General question discussion + exam
21.	**1 hrs. theory 1 hrs. practical**	.To make the students aware of common causes of hyper and hypopigmentation that he/she might encounter during his career .To teach the students how to make a diagnosis of vitiligo or at least suspect the vitiligo in appropriate clinical setting	Disorders of pigmentation	Lecture + practical	General question discussion + exam
22.	**1 hrs. theory 1 hrs. practical**	. To make the students familiar with the common malignant skin tumors and their prognosis and behavior . To make the student suspect a skin lesion as a malignant skin tumor in appropriate clinical setting and consequently referring the patients with a suspected malignant skin tumors to the dermatologists	Skin tumors	Lecture + practical	General question discussion + exam
23.	**1 hrs. theory 1 hrs. practical**	1-To shed light on this common, preventable and serious diseases specially in this age group of student. 2-To teach him for advising our people in locality after graduation	Sexually transmitted infections	Lecture + practical	General question discussion + exam

24.	**1 hrs. theory 1 hrs. practical**	-To shed light on this common, preventable and serious diseases specially in this age group of students. To teach him for advising our people in locality after graduation	Mouth & mucous membrane diseases	Lecture + practical	General question discussion + exam
25.	**1 hrs. theory 1 hrs. practical**	The most important diseases involving the oral cavity, lips & anogenital region	Drug eruptions	Lecture + practical	General question discussion + exam
26.	**1 hrs. theory 1 hrs. practical**	The mechanism of drug rash & specific patterns like FDE		Lecture + practical	General question discussion + exam

11.Cours Evaluation

-Daily exams.
-evaluation perform an action practical experiment in the laboratory.
-Reports preparation
-Mid-course exam.
-final course exam.

Course Description Form for Psychiatry

1. Course Name:
Psychiatry / FIFTH LEVEL
2. Course Code:
Psy
3. Semester / Year:
2025/2026
4. Description Preparation Date:
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
- 60 theoretical hours **- 30 practical hours** **- Total number of units 5**
7. Course administrator's name (mention all, if more than one name)
Name: assist . proff. Jafer sadic / Email: jaafar.sadiq@uos.edu.iq
8. Course Objectives
By the end of the course the students should know what do we mean by mental disorders and understand their classification and etiology in addition to the epidemiology, diagnostic criteria and management
9. Teaching and Learning Strategies

Strategy	• **Theoretical lectures.** • **Teaching small groups by making seminars related to the topics.** • **Show educational videos and pictures related to the parts of the cell and how they divide**

10. Course Structure
The structure of the course for theoretical and practice Dermatology /Fifth academic level

Week	Hours	Required learning outcome	Unit or subject name	Learning method	Evaluation method
1.	Theoretical Practical2	Definition of mental health,psychosis,neurosis, DSM-V,ICD-10	Classiffication and history	**Lecture + practical**	**General question discussion + exam**
2.	Theoretical Practical2	Definition,clinical features,causes,epidemiology,management,prognosis,minimental state examination	Acute confusional state	**Lecture + practical**	**General question discussion + exam**
3.	Theoretical Practical2	Definition,classification,bipolar and unipolar ,dysthymia	Mood disorders	**Lecture + practical**	**General question discussion + exam**
4.	Theoretical Practical2	Clinical features,epidemiology,etiology	Depr eesio n mani a	**Lecture + practical**	**General question discussion + exam**
5.	Theoretical Practical2	Antideprassants,SSRI,TCA,ECT,mood stabilizers	Treatment of mood disorders	**Lecture + practical**	**General question discussion + exam**
6.	Theoretical Practical2	Overview,classification,generalzed anxiety ,panic,clinical features,management	Anxiety disorders	**Lecture + practical**	**General question discussion + exam**

7.	Theoretical Practical2	Definition,classification,clinical presentation,management	Panic disorder,phobias,obsessive compulsive disoder	**Lecture + practical**	**General question discussion + exam**
8.	Theoretical Practical2	Definition ,classification,epidemiology,etiology	Schizophrenia and psychotic disorders	**Lecture + practical**	**General question discussion + exam**
9.	Theoretical Practical2	Clinical features,Schniderian's first rank symptoms,differential diagnosis	Schizophrenia and psychotic disorders	**Lecture + practical**	**General question discussion + exam**
10.	Theoretical Practical2	Treatment,prognosis,family and patient education	Schizophrenia and psychotic disorders	**Lecture + practical**	**General question discussion + exam**
11.	Theoretical Practical2	Background,definition,classification,epidemiology,common features,somatization disorder	Somatiform disorder	**Lecture + practical**	**General question discussion + exam**
12.	Theoretical Practical2	Hypochondriasis,conversion,clinical presentation,management	Somatiform disorders	**Lecture + practical**	**General question discussion + exam**
13.	Theoretical Practical2	Classification,definition,clinical presentation,management	Impulse control disorders	**Lecture + practical**	**General question discussion + exam**

14.	Theoretical Practical2	Definition,types,statistics,by proxy,management	Factitious disorders	**Lecture + practical**	**General question discussion + exam**
15.	Theoretical Practical2	Background,types,causes, management	Sexual disorders	**Lecture + practical**	**General question discussion + exam**
16.	Theoretical Practical2	Studying of normal and psychopathology of psychiatry	signs and symptoms of mental disorders	**Lecture + practical**	**General question discussion + exam**
17.	Theoretical Practical2	-Studying of content of thoughts disorder like delusion (classification according to theme, being primary or secondary, formal thought disorder like (preservation, flightening of thought , echolalia)).	disorders of stream of thoughts	**Lecture + practical**	**General question discussion + exam**
18.	Theoretical Practical2	-It shows response of human being for major events life according to its duration severity, in edition adjustment disorder , PTSD, acute stress reaction.	Reaction to a stressful experiences	**Lecture + practical**	**General question discussion + exam**

19.	Theoretical Practical2	-Lecture expose for isolation of part or all of the consciousness leading to automatic behavior graduated from depersonalization to multiple personality disorder.	Dissociative disorders	**Lecture + practical**	**General question discussion + exam**
20.	Theoretical Practical2	-Stupor characterize rigidity of body muscle plus intact consciousness like psychotic Catatonia, depressive Catatonia, historical Catatonia	Causes of catatonic stupor	**Lecture + practical**	**General question discussion + exam**
21.	Theoretical Practical2	-Intentional due to either mental disease like depression or multiple social pressure. It has multiple risk factors like social	suicide	**Lecture + practical**	**General question discussion + exam**

		pressure, family disharmony, genetic cause.			
22.	Theoretical Practical2	-Iparement of memory most common type are Alzheimer second multi infracted, Alzheimer and others types.	dementia	**Lecture + practical**	**General question discussion + exam**
23.	Theoretical Practical2	Lecture expose for different disturbance of sleep cyclic rhythm, early morning wakenss.	Sleep disorders	**Lecture + practical**	**General question discussion + exam**
24.	Theoretical Practical2	This is the modernize eating disturbance either A.N. which characterize by severe deprivation, repeating vomiting, using of laxatives. Either eating disorder like binj	Eating disorders	**Lecture + practical**	**General question discussion + exam**

25.	Theoretical Practical2	-Group of mental and behavioral disorder starting since early life of age and gradually regress like ADHD,PDVD, Nocturnal enuresis, thumb sucking, tick disorder, ETC.	Child psychiatry	**Lecture + practical**	**General question discussion + exam**
26.	Theoretical Practical2	Its clinical features subdivided into A-attention deficient B-over activity C-combine type D-impulsive type.	Attention deficit hyperactivity disorder	**Lecture + practical**	**General question discussion + exam**
27.	Theoretical Practical2	-Subject expose for different group of psychoactive agent like first-Diazepam second- SNS depressant Third CNS stimulant fourth Hallucinogen	Substance related disorders	**Lecture + practical**	**General question discussion + exam**

		drugs, Hashish, Opiate drug.			
28.	Theoretical Practical2	-It is sadness feelings for loss a loved one characterize by man stages like first denial stage second anger stage third …. Fourth accepting stage. Grief may deviate into prolong, inhabited grief	Bereavement	**Lecture + practical**	**General question discussion + exam**
29.	Theoretical Practical2	Methods used to prevent suicide	Suicide prevention	**Lecture + practical**	**General question discussion + exam**
30.	Theoretical Practical2	Epidemiology,identification,mangement	Psychiatry in primary care	**Lecture + practical**	**General question discussion + exam**

11.Cours Evaluation
-Daily exams. **-evaluation perform an action practical experiment in the laboratory.** **-Reports preparation** **-Mid-course exam.** **-final course exam.**

Course Description Form for Computer Science

1. Course Name:
Computer Science 1/ 1st LEVEL
2. Course Code:
Com108
3. Semester / Year:
2025/2026
4. Description Preparation Date:
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
- 30 theoretical hours **- 60 practical hours** **- Total number of units 2**
7. Course administrator's name (mention all, if more than one name)
Name: assist lec eman iesmael / Email: emainismail@uos.edu.iq
8. Course Objectives
1. Students should have a general idea about the basic types and structure of computers **2. They should know the important electronic terms used in practice** **3. The ability to improve their general knowledge with continuous updates in the electronic field**

9. Teaching and Learning Strategies

Strategy	Theoretical lectures Practical sessions

10. Course Structure

The structure of the course for theoretical and practice Computer Science I/1st academic level

Week	Hours	Unit or subject name	Learning method	Evaluation method
1.	Theoretical Practical2	**مقدمة تاريخية عن تطور الحاسبة , أجيال الحاسبة , ومجالات استخدامها**	**Lecture + practical**	**General question discussion + exam**
2.	Theoretical Practical2	**المكونات المادية للحاسبة ,الأجزاء الملحقة بالمذر بورد**	**Lecture + practical**	**General question discussion + exam**
3.	Theoretical Practical2	**الهارد ديسك , ألسيدي , الفلوبي , أنواع الكروت**	**Lecture + practical**	**General question discussion + exam**
4.	Theoretical Practical2	**الأجزاء الملحقة الكيس , أنواع الشاشات , أنواع الطابعات**	**Lecture + practical**	**General question discussion + exam**
5.	Theoretical Practical2	**أنظمة التشغيل , نظام الويندوز والإصدار السابع**	**Lecture + practical**	**General question discussion + exam**

6.	Theoretical Practical2	**كيفية فتح البرنامج , مكونات النافذة الرئيسية , خواص سطح المكتب**	**Lecture + practical**	**General question discussion + exam**
7.	Theoretical Practical2	**my computer , my document , قائمة أبدا , مكوناتها**	**Lecture + practical**	**General question discussion + exam**
8.	Theoretical Practical2	**Control panel مكونات**	**Lecture + practical**	**General question discussion + exam**
9.	Theoretical Practical2	**كيفية الطباعة , كيفية استخدام خيارات سهلة المنال , تغيير لغة الحاسبة**	**Lecture + practical**	**General question discussion + exam**
10.	Theoretical Practical2	**حذف البرامج , حذف الملفات واسترجاعها ,تكوين الملفات , واستنساخها ,تغيير اسم الملف**	**Lecture + practical**	**General question discussion + exam**
11.	Theoretical Practical2	**تغيير الوقت , ربط الإنترنت , تحويل الحاسبة إلى هاتف , ربط الحاسبة بالشبكات الداخلية**	**Lecture + practical**	**General question discussion + exam**
12.	Theoretical Practical2	**قائمة البرامج , تحديث البرنامج , الملاحق والإضافات**	**Lecture + practical**	**General question discussion + exam**

13.	Theoretical Practical2	**تجميع التجزئة , التنظيف السطحي للأقراص**	**Lecture + practical**	**General question discussion + exam**
14.	Theoretical Practical2	**الراسم وكيفية استخدامه , مستكشف الويندوز, استعادة هيئة معينة للنظام بتاريخ سابق**	**Lecture + practical**	**General question discussion + exam**
15.	Theoretical Practical2		**Lecture + practical**	**General question discussion + exam**
16.	Theoretical Practical2	**معالج النصوص باستخدام الوورد , مكونات النافذة**	**Lecture + practical**	**General question discussion + exam**
17.	Theoretical Practical2	**فتح وإغلاق البرنامج , فتح و حذف وحفظ الملفات , تغيير اسم الملف**	**Lecture + practical**	**General question discussion + exam**
18.	Theoretical Practical2	**إنشاء مستند جديد باستخدام القالب الافتراضي ,كيفية إدخال النصوص**	**Lecture + practical**	**General question discussion + exam**
19.	Theoretical Practical2	**إدخال الرموز , تحديد النصوص , التعامل مع القوائم , قائمة التنسيق**	**Lecture + practical**	**General question discussion + exam**

20.	Theoretical Practical2	**تغيير حجم ونوع الخط , التعداد النقطي , الخلفيات , التباعد بين الأسطر**	**Lecture + practical**	**General question discussion + exam**
21.	Theoretical Practical2	**الحدود , والتظليل ,تطبيق الأنماط , إدراج الصور,**	**Lecture + practical**	**General question discussion + exam**
22.	Theoretical Practical2	**إنشاء الجداول , طرق إنشائها ,إدخال البيانات للجدول , تحرير الجدول**	**Lecture + practical**	**General question discussion + exam**
23.	Theoretical Practical2	**المخططات , إدراج المخطط , العمل بالعمليات الحسابية**	**Lecture + practical**	**General question discussion + exam**
24.	Theoretical Practical2	**مايكروسوفت بوربوينت , فتح وإغلاق البرنامج , مكونات النافذة ,**	**Lecture + practical**	**General question discussion + exam**
25.	Theoretical Practical2	**, فتح و حذف وحفظ الملفات , تغيير اسم الملف ,العمل مع الشرائح , إعداد الشريحة**	**Lecture + practical**	**General question discussion + exam**
26.	Theoretical Practical2	**استخدام القوالب الجاهزة , إدخال النصوص إلى الشريحة , عرض الشرائح**	**Lecture + practical**	**General question discussion + exam**

27.	Theoretical Practical2	**ترتيب و حذف وإدراج الشرائح , إضافة الأشكال الرسومية**	**Lecture + practical**	**General question discussion + exam**
28.	Theoretical Practical2	**تحريك العناصر بالشريحة , تحريك الشرائح ,**	**Lecture + practical**	**General question discussion + exam**
29.	Theoretical Practical2	**إدخال الأفلام في الشريحة , العرض المايكروي**	**Lecture + practical**	**General question discussion + exam**
30.	Theoretical Practical2	**ترتيب و حذف وإدراج الشرائح , إضافة الأشكال الرسومية**	**Lecture + practical**	**General question discussion + exam**

Course Description Form for Computer Science II

1. Course Name:
Computer ScienceII/ 2nd LEVEL
2. Course Code:
Comp108
3. Semester / Year:
2025/2026
4. Description Preparation Date:
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
- 30 theoretical hours **- 60 practical hours** **- Total number of units 2**
7. Course administrator's name (mention all, if more than one name)
Name: assist lec eman iesmael / Email: emainismail@uos.edu.iq
8. Course Objectives
1. Students should have a general idea about the basic types and structure of computers **2. They should know the important electronic terms used in practice** **3. The ability to improve their general knowledge with continuous updates in the electronic field**

9. Teaching and Learning Strategies

Strategy	Theoretical lectures Practical sessions

10. Course Structure

The structure of the course for theoretical and practice Computer Science II /second academic level

Week	Hours	Unit or subject name	Learning method	Evaluation method
1.	Theoretical Practical2	Security and Networking: What is a network? Types of networks. Basic network components.	**Lecture + practical**	**General question discussion + exam**
2.	Theoretical Practical2	Security and Networking (Cont.): Network Security Basics. Understanding network threats.	**Lecture + practical**	**General question discussion + exam**
3.	Theoretical Practical2	**E-Commerce:** Concepts of Electronic banking services: online banking, ATM and debit card services, Phone banking, SMS banking, electronic alerts, Mobile banking.	**Lecture + practical**	**General question discussion + exam**
4.	Theoretical Practical2	**Computer Troubleshooting:** Identifying and solving common hardware and software problems that computer users encounter.	**Lecture + practical**	**General question discussion + exam**

5.	Theoretical Practical2	**Computer Troubleshooting (Cont.):** Basic troubleshooting techniques and tools for diagnosing and resolving issues.	**Lecture + practical**	**General question discussion + exam**
6.	Theoretical Practical2	**Introduction to AI:** Definition of AI, History of AI, AI Techniques and Approaches.	**Lecture + practical**	**General question discussion + exam**
7.	Theoretical Practical2	**Introduction to AI(Cont.):** Key Characteristics of AI, Benefits of AI, Challenges and Ethical considerations.	**Lecture + practical**	**General question discussion + exam**
8.	Theoretical Practical2	**The Role of AI in Modern Smartphones:** AI-Driven Mobile Technologies, Virtual Assistants (Siri, Google Assistant, Alexa).	**Lecture + practical**	**General question discussion + exam**
9.	Theoretical Practical2	**The Role of AI in Modern Smartphones (Cont.):** Adaptive Learning, Real-Time Translation Services.	**Lecture + practical**	**General question discussion + exam**
10.	Theoretical Practical2	**Applications and Tools of AI: Overview of AI** Applications in Various Industries, Education and Healthcare.	**Lecture + practical**	**General question discussion + exam**
11.	Theoretical Practical2	**Applications and Tools of AI (Cont.):** Transportation, Marketing and Advertising.	**Lecture + practical**	**General question discussion + exam**

12.	Theoretical Practical2	**Applications and Tools of AI(Cont.):** Finance, Robotics and Automation Technologies.	**Lecture + practical**	**General question discussion + exam**
13.	Theoretical Practical2	**AI and Society: How** AI affects society, AI and international relations, AI and the future of humanity.	**Lecture + practical**	**General question discussion + exam**
14.	Theoretical Practical2	**Ethical Challenges in AI:** AI ethics, privacy and surveillance, the impact of AI on the job market.	**Lecture + practical**	**General question discussion + exam**
15.	Theoretical Practical2	**The Future of AI:** Future trends in AI, recent research and emerging technologies.	**Lecture + practical**	**General question discussion + exam**

Academic Description Form For The physiology and medical physics Branch

This course description provides a necessary summary of the most important characteristics of the course and the learning objectives that the student is expected to achieve, demonstrating whether he or she has made the most of the learning opportunities available. It must be linked to the program description.

1. **Program Vision**
Following graduation, our students will be able to work in a multidisciplinary team in health sector to ensure the team's optimal functioning and effective patient outcomes.

2. **Program Mission**
Our college seeks to get the international accreditation, rise to the global level in terms of the outcome's quality, and graduate medical doctors who are highly effective in patient's care, medical education research, and community service.

3. **Program Objectives**

- Achieving of quality standards and medical accreditation according to IGL derived on the basis of scientific institutional quality standards.
- Graduating medical doctors, with a bachelor's degree in medicine and general surgery, who will be well-prepared to conduct a patient examination, diagnose the disease, and dispense treatment on a scientific and medical basis, advanced clinical, and professional knowledge, skills, and attitudes they need to practice in an ethical manner to provide excellent health services and enable them for long life learning.
- Preparing doctors who will be able to interact in the workplace and solve urgent problems in response to the needs of the health delivery system/ society and changing circumstances which make them capable of working in Iraq and internationally, as well as pursuing postgraduate study and training in any medical branch.

- Graduating doctors with high skills and knowledge in conducting scientific research in basic, clinical, behavioral, and biomedical fields.
- Encouraging faculty, staff, and students to enhance their technical skills and utilize information and communication technology to convey knowledge, produce scientific research, and create curricula for educational programs.
- Implementing a development program for the faculty and staff.

4. **Program Accreditation**
The college has sent a request to get it.

5. **Other external influences**
Teaching hospital, library, internet, community, doctors' syndicate.

6. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
2025-2026/First	Phys104	Medical Physics	Theory: 30 hours	Practical: 30 hours
2025-2026/First	Term107	Medical Terminology & Foundation of Medicine	Theory: 60 hours	
2025-2026/Second	Physo 204	Physiology	120 hr	90hr
2025-2026/third	Med305	**Internal medicine3**	45hr	60hr
2025-2026/fourth	Med401	**Internal medicine4**	120hr	120hr
2025-2026/fifth	Med510	**Internal medicine5**	75hr	60hr
2025-2026/six	Med601	**Internal medicine6**		360hr
2025-2026/ fourth	Obgy403	**Obstetrics 4**	60hr	90hr
2025-2026/ fifth	Gyn506	**Gynecology5**	60hr	60hr
2025-2026/ six	Obgy604	**Obstetrics and gynecology6**		360 hr

8. Expected learning outcomes of the program

Knowledge

- ✓ Striving towards the development, refinement and mastery of the skills necessary to be able to rise to the top through the use of
  Abilities, qualifications and information acquired during theoretical, practical and applied study Learning
  Continuous search for updates using the library and the Internet
- ✓ Attending seminars and specialized scientific seminars
- ✓ Active presence in teaching hospitals to hone skills and break the barrier of fear and hesitation.
- ✓ Proposing strategies, plans and executive policies to ensure quality and reliabilityLearning the basics of human physiology and medical physics and its various vocabulary.
- ✓ Developing mental abilities through various modern academic and practical education

methods.

- ✓ Linking basic sciences with applied sciences in the future.
- ✓ Learn about the methods of action and effect of drugs.
- ✓ Learn the method of scientific discussion.
- ✓ Acquisition of laboratory skills.
- ✓ Develop the cognitive and technical skills needed in outpatient clinics, emergency rooms, inpatient units, operating rooms and delivery rooms to manage obstetrics and gynecology problems.
- ✓ To gain an understanding of the foundations of the basic sciences of clinical obstetrics and gynecology that will form the basis of evidence-based clinical practice and lifelong continuing medical education

Skills

- ✓ Learning the methods of dealing with laboratory animals and scientific equipment.
- ✓ Learning how to use chemical and physical materials.
- ✓ Acquisition of clinical examination skills.
- ✓ Methods of dealing with devices and their work on the human body
- ✓ Learning how to use physical materials.
- ✓ Learning how to link the benefits of the experience and link them with the medical benefits.

✓ **Ethics**

- ✓ Learning the ethical manner in dealing with patients, their families, and colleagues to provide excellent health services.

- ✓ Ethical and professional discipline.
- ✓ Good interaction of students with each other.
- ✓ Develop a spirit of help.
- ✓ Eliminate class differences.

9. Teaching and Learning Strategies

- ✓ Lectures, computers, plasma screens, modern scientific equipment, clinica tours, educational seminars, audio-visual equipment, and small groups discussions.
- ✓ In-person and electronic blended education (via the Classroom platform).

10. Evaluation methods

- ✓ Discussion in lectures.
- ✓ Mid-course exams and end-of-course exams.
- ✓ Periodic evaluation through quizzes.
- ✓ Small Education Groups.
- ✓ Practical exams.
- ✓ Reports.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/ (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Professor.hatim abd alkarem	Physics	Medical Physics			√	None
Ass. Prof.qayser abd alhusain	Physics	Medical Physics			√	None
Ass. Prof.sadiq lafta					√	None
	Medicine and General Surgery	Biochemistry			√	None
Ass. Prof.oday abd alrazaq	Medicine and General Surgery	Internal medicine			√	None
Ass. Prof.rasha jwad	Medicine and General Surgery	Internal medicine			√	None
lec hayder abd alzahra	Medicine and General Surgery	Internal medicine				√
Dr.samih abd ogheb	Medicine and General Surgery	Internal medicine				√
Dr.akram rasol	Medicine and General Surgery	Internal medicine				√
Dr.rahab algalibi	Medicine and General Surgery	Gynecology				√
Dr.aliaa algalibi	Medicine and General Surgery	Gynecology				√
Dr.warkaa mared	Medicine and General Surgery	Gynecology				√

Professional Development

Mentoring new faculty members

New faculty members will get orientation seminars and regular meetings to familiarize them with the work, daily supervision, ongoing follow-up, and guidance and instruction.

Professional development of faculty members

Regular training can be achieved through actively participating in various labs, attending seminars and specialist scientific symposia, and searching for advancements online and in libraries.

12. Acceptance Criterion

After compiling the online application, the Ministry of Higher Education and Scientific Research centrally processes admissions based on test scores in the scientific branch of the twelfth grade of the high school.

13. program

University and college website, in addition to website of the Ministry of Higher Education and Scientific Research, along with college library and university's central library.

14. Program Development Plan

- Developing the college's scientific and administrative staff by identifying their strengths and shortcomings through yearly evaluation files.
- Propose strategies, plans, methods, and operational policies to ensure quality and reliability.
- Establish principles for implementing academic accreditation and quality to get the international accreditation.

Program Program														
				Required program Learning outcomes										
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics		
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2025-2026/First	Phys104	Medical Physics	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/First	Term107	Medical Terminology & Foundation of Medicine	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/Second	Physo 204	Physiology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/third	Med305	**Internal medicine3**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/fourth	Med401	**Internal medicine4**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/fifth	Med510	**Internal medicine5**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/six	Med601	**Internal medicine6**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/ fourth	Obgy403	**Obstetrics 4**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/ fifth	Gyn506	**Gynecology5**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025-2026/ six	Obgy604	**Obstetrics and gynecology6**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Description Form for medical physics

1. **Course Name:**
medical physics
2. **Course Code:**
PHYs104
3. **Semester / Year:**
2025-2026
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
1st year: 60hours theoretical + 60hours practical (8 units)
7. Course administrator's name (mention all, if more than one name)
Name: Ass. Prof. Drrasha jwad E-mail: r.kadhim_uos.edu.iq
8. Course Objective

Course Objectives	✓ Determining the functions of the different body systems. ✓ Describe the mechanism of action of the various body systems and the accompanying sequence of physiological events. ✓ Estimation of the normal values of biological activities in relation to different biological conditions. ✓ Distinguish between the normal and abnormal functions of the different body systems. ✓ Clarify the amount of change in the natural functions of different body systems and accompanying some disease states. ✓ Expanding knowledge through periodicals, medical books and the Internet. ✓ Apply the basic scientific building blocks he has acquired to conduct scientific research and medical studies.
9. Teaching and Learning Strategies	
Strategy	✓ Small scientific circles. ✓ Discussions. ✓ Seminars. ✓ In-person and electronic blended education (via the Classroom platform).

10- Course Structure of Physics /First year /Theory			
Week	**Unit name and/or topic**	**Education method**	**Evaluation method**

		Lecture	Exam
	CHAPTER ONE: TERMINOLOGY AND MEASUREMENTS IN MEDICINE **1.1- Fields of medical physics:** 1- Physiological parameters 2- Diagnosis: 3- Treatment: 4- Prevention medicine: **1.2- Standard and nonstandard units in medicine:** 1- Standard units: 2- Nonstandard units: **1.3- Repetitive and non-repetitive measurements:** 1- Repetitive measurement: 2- Non-repetitive measurement: **1.4- Accuracy of measurement:** 1- Measurement errors: 2- False negative and positive errors: **1.5- Reduction of diagnostic errors and measurement uncertainties:** **1.6- Medical measurements proceed the treatment:** 1- Routine measurements: 2- Other required tests: ***CHAPTER TWO: ENERGY OF THE BODY*** **2.1- Forms of energies in the body:** 1- Potential energy (E_p): 2- Kinetic energy: 3- Electrical energy: 4- Heat energy: 5- Nuclear energy: 6- Chemical energy: **2.2- Chemical energy of the body:** **2.3- Chemical energy molecules [adenosine triphosphate (ATP) and adenosine diphosphate (ADP)]:**		

	1- Adenosine triphosphate (ATP): 2- Adenosine diphosphate (ADP): 3- Mitochondria, power plant of the body: 2.4- **Glucose level in the blood as energy consumption indicator:** 1- Normal glucose level in the blood: 2- Diabetes mellitus (high glucose level in the blood): 3- Types of diabetes: o I- Type 1 diabetes (juvenile diabetes): o II- Type 2 diabetes: o III- Gestation (pregnancy) diabetes: **2.5- Tests of glucose level in the blood:** 1- Fasting plasma glucose (FPG) test: 2- Oral glucose tolerance test (OGTT): 3- Hemoglobin A1c (Hb A1c or A1c) test: 4- Post prandial (2 hrs post meal) test: 5- Random plasma glucose test: **2.6- Energy of muscle contraction:** 1- Energy supply by aerobic respiration: 2- Energy supply by anaerobic respiration: 3- Energy supply by interaction of ADP with creatine phosphate: **2.7- Muscle fatigue:** **2.8- Work of the body:** 1- External work of the body: 2- Internal work of the body: **2.9- Work of the heart:** 1- Systole and diastole of the heart: 2- Cardiac cycle: 3- Stroke volume of the heart: 4- Cardiac output: 5- Calculation of the heart work: **2.10- Power of the body:** **2.11- Efficiency of the body:** 1- Efficiency of the cell: 2- Efficiency of the prediabetic and diabetic cells: **2.12- Heat of the body:** 1- Heat from internal consumption of the fuel molecules:		

2- Heat from muscles activity:
3- Heat from outer surroundings of the body:

2.13- Body core temperature:

1- Normal body core temperature:
2- Classes of body core temperature:

2.14- Thermoregulation of the body core:

1- Maintaining of the body core temperature:
2- Thermoregulatory centre of the body core:

- I- Warm sensitive neurons:
- II- Cold sensitive neurons:

2.15- Obesity of the body:
2.16- Proper and improper treatments of obesity:

1- Medication treatments:

I- Diuretics (water pills):
II- Diet nutrients for muscular hypertrophy:
III- Diet pills:

2- Bariatric surgery (weight loss surgery):

CHAPTER THREE: DYNAMICS OF THE BODY AND BODY ORGANS

3.1- Forces on and in the body:

1- **Gravitational force (gravity):**

I- Varicose formation:
II- Effect on the arteries blood pressure:
III- Space medicine problems:

2- **Magnetic force:**

I- Threshold physiological response for magnetic field:
II- Using protons magnetic fields in medicine:

3- Electric force:
4- Nuclear force:
5- Friction forces:

I- External friction force:
II- Internal friction force:

6- **Muscular forces:**

3.2- Forces of the skeletal muscles contraction:

1- Isotonic contraction:

	I- Concentric contraction: II- Eccentric tension: 2- Isometric contraction: **3.3- Transmission of muscle forces to the bones:** **3.4- Bone strength and bone remodeling:** 1- Bone strength: 2- Bone remodeling: **3.5- Bone response for mechanical stress:** 1- Effects of mechanical stress on the bone: 2- Bone elasticity: **3.6- Cartilages; the force absorbers:** **3.7- Stress on the vertebral column:** 1- Vertebrae and vertebral discs: 2- Stress on the lower back: 3- Reduction of stress on the lower back: **3.8- Bone fractures:** **3.9- Repair of the bone fracture:** 1- Reduction process: 2- Healing process: I- Hematoma formation: II- Fibrocartilaginous callus formation: III- Bony callus ossification: IV- Bone remodeling: **3.10- Motion control by the bone joints:** 1- Synovial joints: 2- Fibrous joints: 3- Cartilaginous joints: **3.11- Pressure in the body organs:** **3.12- Blood pressure:** **3.13- Categories of the blood pressure:** 1- Hypertension blood pressure: 2- Hypertension blood pressure: (Note: This appears to be a duplication/error in the original; likely intended to be "Hypotension") **3.14- Sphygmomanometers (devices of blood pressure measurement):** 1- Manual sphygmomanometers: 2- Digital sphygmomanometer:		

3.15- Blood pressure measurement:

1- Regulations of blood pressure measurement:
2- Procedure of blood pressure measurement:
3- Korotkoff sounds (K sounds):
4- Interarm blood pressure:

3.16- Skull pressure:

1- Hydrocephalus (water head):
2- Measurement of the hydrocephalus:

I- Measurement of the head circumference method:
II- Transillumination method:
III- Imaging scanners method:

3.17- Eye pressure:

1- Normal eye pressure:
2- Ocular hypertension (glaucoma):

3.18- Pressure in the digestive system:
3.19- Intra-abdominal pressure (IAP):

1- Direct IAP measurement:
2- Indirect IAP measurement:

3.20 - Pressure in the skeleton:
3.21- Pressure in the urinary bladder:
3.22- Cytometry for bladder pressure measurement:

1- Methods of cystometry:
2- Uses of cystometry:

3.23- Stages of cystometry:

1- Filling stage cystometrogram:
2- Voiding stage cystometrogram:

3.24- Foley catheter:
3.25- Hyperbaric oxygen therapy (HOT):

1- Gas gangrene therapy by HOT:
2- Carbon monoxide (CO) poisoning therapy by HOT:
3- Enhancement of cancer radiotherapy by HOT:
4- Decompression sickness (DCS) therapy by HOT:

CHAPTER FOUR: APPLICATIONS OF BIOMATERIALS IN MEDICINE

	4.1- Types of biomaterials: 1- Natural biomaterials 2- Synthetic biomaterials 3- Composite biomaterials **4.2- Characteristics of the biomaterials:** 1- Biocompatibility 2- Biodegradable 3- Nontoxic: Relatively available, easy to produce, and able to attach. 4- Biomechanical stability 4.3- Surgery biomaterials: 1- Orthopedics biomaterials 2- Cardiovascular surgery biomaterials 3- ENT biomaterials 4- Corrective surgery biomaterials 5- Surgical sutures biomaterials 6- Surgical meshes biomaterials 7- Ophthalmic biomaterials **4.4- Dentistry biomaterials** **4.5- Grafting surgery biomaterials** **4.6- Skin grafting biomaterials** 1- Split thickness skin graft (STSG) (or split-level thickness graft) 2- Full thickness skin graft **4.7- Bone and dental grafting:**		

	1- Bone grafting 2- Dental grafting **4.8- Ligaments grafting biomaterials** **4.9- Stents implantation in the blood arteries:** 1- Artery stent 2- Angiography (arteriography) 3- Angioplasty (stent insertion) **4.10- Coronary stent:** 1- Coronary atheroma 2- Coronary stent insertion **4.11- Vascular stents:** 1- Types of vascular stents 2- Applications of vascular stents **4.12- Drainage stents:** 1- Ureteral stents 2- Prostatic stents 3- Biliary stents (bile duct stents) 4- Pancreatic stents 5- Esophageal stents 6- Colonic stents 7-Glaucoma stent (hydrus stent) ***CHAPTER FIVE: SOUND IN MEDICINE*** **5.1- Characteristics of the sound waves:** 3- Sound pitch 4- Sound tone 5- Sound octaves **5.2- Systems of vocal sound (voice) production:**		

	1- Respiratory system (lungs and chest diaphragm) 2- Phonatory system [vocal cords (folds)] 3- Resonator system (resonators and articulators) **5.3- Mechanism of hearing:** 1- Outer ear hearing function 2- Middle ear (tympanic cavity) hearing function 3- Inner ear (internal ear or auris interna) hearing function **5.4- Hearing loss:** 1- Conductive hearing loss 2- Sensorineural hearing loss 3- Mixed hearing loss **5.5- Audiometry conduction hearing test:** 1- Air conduction audiometry test 2- Bone conduction audiometry test **5.6- Stethoscopes:** 1- Acoustic stethoscope 2- Electronic stethoscope **5.7- Lithotripsy [extracorporeal shockwaves lithotripsy (ESWL)]:** 1- Kidney stones diagnosis 2- The lithotripter 3- Procedure of ESWL treatment 4- Cavitation effect in lithotripsy ***CHAPTER SIX: MEDICAL SONOGRAPHY*** **6.1- Ultrasound waves** **6.2- Medical sonography technique:** 1- Sonogram performance 2- Tissue characteristics affect ultrasound velocity 3- Ultrasound beam intensity 4- Medical applications of sonography 5- Advantages of sonography **6.3- Ultrasound generation crystals:** 1- Piezoelectric and ferroelectric crystals 2- Ultrasound crystal design 3- Crystal oscillation **6.4- Parameters affect the transmission of ultrasound waves in the skin and tissues:** 1- Acoustic impedance		

	2- Lubricating gel 3- Angle of beam incidence **6.5- Echo (ultrasound reflection)** **6.6- Sonography image display:** 1- Echo reception by the transducer 2- Image display **6.7- Factors affect the absorption of ultrasonic beam:** 1- Viscosity of the conducting medium 2- Relaxation time 3- Frequency of ultrasound **6.8- Construction of the probes of ultrasound scanner:** 1- Crystal element arrays 2- Damping (backing) material 3- Quarter wave matching layer 4- Housing 5- Acoustic lens **6.9- Classification of medical sonographic probes:** 1- Probes classification relative to the crystal elements arrangements 2- Probes classification relative to their uses **6.10- Sector and compound scans:** 1- Sector scan 2- Compound scan **6.11- Modes of sonography:** 1- Historical sonography 2- Real time sonography **6.12- Doppler sonography:** 1- Doppler effect 2- Medical applications of Doppler sonography 3- Technical tests of medical Doppler sonography **6.13- Continuous and pulsed wave Doppler sonography:** 1- Continuous wave Doppler (CW Doppler) 2- Pulsed wave Doppler (PW Doppler) **6.14- Doppler echo cardiography (echocardiography):**		

	1- Transthoracic echocardiography (TTE) 2- Transesophageal echocardiography (TEE) 3- Intracardiac echocardiography (ICE) 4- Intravascular echocardiography (intravascular ultrasound) 5- 3D and 4D echocardiography (3DE and 4DE) 6- Fetal echocardiography 7- Stress echocardiography (stress echo) 8- Deformation echocardiography (strain rate imaging) **6.15- Ultrasound enhancing agents (ultrasound contrast agents):** 1- Characteristics of ultrasound enhancing agents (UEA) 2-type of ultrasound enhancing agents 3- other uses of ultrasound enhancing agent **6.16-historical sonography** 1-amplited mode (A mode) 2-Time motion mode (TM mode) 3-Buildup mode (B mode) 4-Gray scale imaging ***CHAPTER SEVEN: PRINCIPLES AND APPLICATIONS OF ELECTRICITY IN THE BODY*** **7.1- Body cells; the huge sources of electricity** **7.2- Types of electric potentials in the cells:** 1- Resting potential 2- Acting signal potentials **7.3- Propagation of action potentials** **7.4- Factors affect signal velocity in the nerve:** 1- Nerve fiber diameter 2- Nerve fiber myelination **7.5- Effect of myelin on the axon electrical properties:** 1- Reduction of discharge in the cell membranes 2- Increasing of the electric insulation 3- Increasing of the conduction velocity **7.6- Determination and timing of the heart beats:**		

	1- Heart conduction system 2- Heart pacemaker (time clock) 3- Heart muscle contraction **7.7- Mechanisms of cardiac conduction:** 1- Sinostrial (SA) node (heart pacemaker) 2- Atrioventricular (AV) node (heart pacesetter) 3- Bundle of His 4- Bundle branches (Tawara branches) 5- Purkinje fibers **7.8- Artificial pacemakers** **7.9- Construction of the artificial pacemakers:** 1- Leads artificial pacemakers 2- Leadless artificial pacemakers **7.10- Types of leads artificial pacemakers:** 1- Single chamber pacemaker 2- Dual chamber pacemaker 3- Biventricular pacemaker 4- Rate responsive pacemaker 5- His bundle pacing 6- Emergency pacemakers **7.11- Installation of the artificial pacemakers:** 1- Installation of leads pacemakers 2- Installation of leadless pacemakers **7.12- Electrocardiogram (ECG)** **7.13- Normal ECG deflection waves:** 1- P wave 2- QRS complex 3- T wave **7.14- Normal ECG intervals:** 1- PQ (or PR) interval 2- ST interval 3- QT interval **7.15- Electrical activity of the muscles** **7.16- Electromyography (EMG):**		

	1- Types of EMG 2- Factors affect the EMG 3- Methods of EMG performance **7.17- Electroencephalography (EEG):** 1- Brain electrical activity 2- EEG procedure 3- Uses of EEG **7.18- Waves patterns of normal brain on the EEG:** 1- Delta (Δ) waves 2- Theta (θ) waves 3- Alpha (α) waves 4- Mu (μ) waves 5- Beta (β) waves 6- Gamma (γ) waves **7.20- Electrical activity of the gastrointestinal system** **7.21- Electrogastrography (EGG)** ***CHAPTER EIGHT: LIGHT IN MEDICINE*** **8.1- General properties of light** **8.2- Vision by the eye optical and neural portions:** 1- Light focusing by the optical portion of the eye 2- Signals production and processing by the neural portion of the eye **8.3- Eye defects** **8.4- Myopia (near sightedness) defect and its correction:** 1- Myopic eye vision 2- Correction of myopic vision **8.5- Hypermetropia (far sightedness) defect and its correction:** 1- Hypermetropia eye vision 2- Correction of hypermetropia **8.6- Presbyopia (old sightedness) defect and its correction** **8.7- Astigmatism defect and its correction:** 1- Characteristics of astigmatism defect		

	2- Eye meridians 3- Types of astigmatism 4- Astigmatism correction 5- Astigmatism prescription **8.8- Keratoconus defect and its correction** **8.9- Cataract defect and its correction** **8.10- Contact lenses:** 1- Toric contact lens 2- Rigid gas permeable (RGP or GP) contact lens 3- Bitoric GP contact lens 4- Hybrid contact lens **8.11- Visual Acuity** **8.12- Eye Vision test devices:** 1- Vision Charts 2- Slit lamp biomicroscope 3- Tonometer 4- Retinoscope (skiascope) 5- Phoropter (refractor) 6- Ophthalmoscope (fundoscopy) 7- Keratometer (ophthalmometer) 8- Corneal topography (photokeratoscopy or vediokeratographer) **8.13- Endoscopes** ***CHAPTER NINE: LASER THERAPY AND LASER SURGERY*** **9.1- Medical laser** **9.2- Construction of the laser device:** 1- Energy pump (laser pumping) 2- Gain medium (lasting medium or active medium) 3- Optical resonator (optical cavity or resonator cavity) **9.3- Operation of the laser device:** 1- Stimulated emission of radiation 2- Population inversion		

	9.4- Excitation levels for operation of laser systems: 1- Two level (2L) laser system 2- Three level (3L) laser system 3- Four level (4L) laser system **9.5- Types of lasers used in medicine:** 1- Solid state lasers 2- Liquid state lasers 3- Gaseous state lasers **9.6- Carbon dioxide (CO_2) laser:** 1- Gain medium of CO_2 laser 2- Characteristics of CO_2 laser **9.7- Excimer and exciplex gaseous lasers:** 1- Gain media of excimer and exciplex lasers 2- Operation of the excimer lasers 3- Applications of the excimer lasers in medicine **9.8- Quality-switched (Q-switched) laser:** 1- Characteristics of the Q-switched laser system 2- Q-switched lasers utilized in medicine **9.9- Mechanism of laser interaction with the body tissues:** 1- Reflection of the laser beam 2- Absorption of the laser beam 3- Electromechanical effect 4- Thermal effects **9.10- Ablation, coagulation, and surgery (cutting) by laser:** 1- Laser ablation (photoablation) 2- Laser coagulation (photocoagulation) 3- Laser cutting (microsurgery) **9.11- Low level laser therapy (LLLT):** 1- Characteristics of LLLT 2- Therapeutic effects of LLLT **9.12- Photodynamic therapy (PDT):** 1- PDT photosensitizers 2- Uses of PDT in medicine		

	9.13- Laser cancer therapy systems: 1- CO_2 laser 2- Argon laser 3- Nd: YAG laser **9.14- Medical uses of laser in ophthalmology:** 1- Eye defects correction 2- Eye cornea structure 3- Retinal laser surgery **9.15- Lasik eye surgery:** 1- Characteristics of lasik surgery 2- Before the lasik surgery 3- During the lasik surgery 4- Advantages and disadvantages of lasik surgery **9.16- Lasek eye surgery:** 1- Requirements for lasek surgery 2- Comparison between lasik and lasek **9.17- Photorefractive keratectomy (PRK)** **9.18- Femtolaser laser assisted cataract surgery** **9.19- Retinal detachment laser surgery:** 1- Types of retinal detachment 2- Diagnosis of retinal detachment 3- Retinal detachment laser therapy **9.20- Diabetic retinopathy (DR) laser therapy:** 1- Effect of diabetes on the retina 2- Diagnosis of diabetic retinopathy 3- Laser therapy of diabetic retinopathy **9.21- Central serous retinopathy (CSR) laser therapy:** 1- Central serous retinopathy 2- Symptoms of serous retinopathy 3- Diagnosis and therapy of serous retinopathy **9.22- Ocular histoplasmosis retinopathy laser therapy:** 1- Ocular histoplasmosis retinopathy 2- Laser therapy of ocular histoplasmosis retinopathy **9.23- Age related macular degeneration (ARMD) laser**		

	therapy **9.24- Laser systems utilized in dentistry:** 1- Erbium lasers 2- CO_2 Lasers 3- Diode lasers ***CHAPTER TEN: X-RAY RADIOGRAPH*** **10.1- Discovery of X- rays** **10.2- X-ray generator:** 1- X-ray tube 2- Power supply 3- Operating console 4- Cooling system **10.3- Types of X-rays:** 1- Bremsstrahlung X-rays 2- Characteristic X-rays **10.4- Attenuation of X-ray beam** **10.5- Interaction of X-rays with the human body:** 1- Photoelectric effect (PE) 2- Compton effect (CE) **10.6- X-ray filters:** 1- Inherent filtration 2- Added filtration 3- High energy filtration **10.7- Restrictors of X-rays:** 1- Aperture diaphragms 2- Collimators 3- Cones and cylinders **10.8- X-ray grids:** 1- Grid function 2- Types of grids **10.9- Grid ratio:** 1- Uses of grid ratios 2- Numbers expression of the grid ratios		

	10.10- X-ray film: 1- Film base 2- Adhesive material 3- Emulsion layer 4- Super coating material 5- Intensifying screens **10.11- X-ray radiography procedure** **10.12- Radiography of the body major substances:** 1- Air radiography 2- Fats radiography 3- Water and liquids radiography 4- Muscles (soft tissues) radiography 5- Bones radiography 6- Pathological conditions radiography **10.13- X-ray contrasting agents:** 1- Positive contrast agents 2- Negative contrast agents **10.14- X-ray contrasting radiography:** 1- Upper GI track X-ray contrasting radiography 2- Lower GI track X-ray contrasting radiography 3- Blood stream X-ray contrasting radiography 4- Lung airways X-ray contrasting radiography **10.15- Mammography (macrography):** 1- Mammography technique 2- Mammography procedure **10.16- Types of mammography:** 1- Screening mammography 2- Diagnostic mammography **10.17- Conventional and digital dental X-ray radiography** **10.18- Intraoral and extraoral dental radiography:** 1- Intraoral dental radiography 2- Extraoral dental radiography 3- Appearance of dental X-ray radiography		

	4- Dental X-ray protection **10.19- Pantomography (PAN):** 1- Pantomography technique (PAN) 2- Pantomography procedure 3- Pantomography medical uses ***CHAPTER ELEVEN: COMPUTED TOMOGRAPHY (CT) SCANNER*** **11.1- CT scanner technique** **11.2- CT scanner components:** 1- X-ray generator 2- The gantry 3- Sliding table 4- Computer system 5- Console panel 6- Laser beam 7- Slip ring **11.3- Imaging technique of CT scanner** **11.4- X-ray computed tomography (slices of the intended object):** 1- X-ray beams projections 2- Focal plane 3- Slice thickness 4- Tomographic motion 5- Table increment **11.5- Blur of CT scanner images** **11.6- Tomographic and exposure angles:** 1- Wide angle tomography 2- Narrow angle tomography (zoography) **11.7- Generations of CT scanners** **11.8- First generation: Rotate/translate, pencil beam CT scanner** **11.9- Second generation: Translate/rotate, narrow fan beam CT scanner**		

	11.10- Third generation: Rotate/rotate, wide fan beam CT scanner ***CHAPTER TWELVE: MAGNETIC RESONANCE IMAGING (MRI) SCANNER*** **12.12- Phase and frequency encoding** **12.13- Protons longitudinal (T1) and transverse (T2 and T2*) relaxation times:** 1- T1 relaxation time (longitudinal relaxation) 2- T2 and T2* relaxation time (transverse relaxation) **12.14- Effect of spin echo sequences on the image contrast:** 1- Spin echo sequences 2- Tissue contrast relative to T1, and T2 and T2* 3- Types of spin echo sequences **12.15- Gradient echo sequences** **12.16- MRI contrasting agents:** 1- Diamagnetic agents 2- Paramagnetic agents 3- Supermagnetic agents 4- Ferromagnetic agents **12.17- Basic imaging of MRI** **12.18- Comparison between CT and MRI scanners** 1-Motion artifact 2-Streak artifact 3-Beam hardening artifact 4-Ring artifact **11.19-Advantage of CT scanners** **11.20-uses of CT scanners**		

11.21 General indication of read Ct Scans

CHAPTER TWELVE: MAGNETIC RESONANCE IMAGING (MRI) SCANNER

12.1-Magnetic resonance imaging (MRI) device

1-MRI technique

2-Protons the main material of MRI scanning

12.2- Types of MRI scanners:

1- Closed MRI scanner

2- Wide bore closed MRI scanner

3- Truly opened MRI scanner

4- Upright opened (multi position or face opened) MRI scanner

5- Opened MRI scanner with a scanning table

12.3- Proton angular momentum

12.4- Magnetic dipole moment (MDM) of the protons

12.5- Precession and Larmor frequency of the protons in MRI scanning:

1- Precession of the protons

2- Larmor frequency

12.6- Magnetization of the tissues by applying main magnet (B_0) and RF pulses:

1- Tissue magnetization by applying B_0

2- Tissue magnetization by applying B_0 and RF pulses

12.7- Essential apparatus of MRI system

12.8- Main magnets of MRI:

1- Permanent magnet

2- Resistive magnets

3- Super conducting magnets

	12.9- Radio frequency (RF) coils: **1-** Volume coils 2- Surface coils **12.10- Functions of transmitter and receiver RF coils in MRI scanning:** **1-** Functions of transmitter RF coils 2- Function of Receiver RF coil **12.11- Gradient coils:** **1-** Magnetic field gradient (G_m) 2- Slice selection gradient **12.12- Phase and frequency encoding** **12.13- Protons longitudinal (T1) and transverse (T2 and T2*) relaxation times:** **1-** T1 relaxation time (longitudinal relaxation) 2- T2 and T2* relaxation time (transverse relaxation) **12.14- Effect of spin echo sequences on the image contrast:** **1-** Spin echo sequences 2- Tissue contrast relative to T1, and T2 and T2* 3- Types of spin echo sequences **12.15- Gradient echo sequences** **12.16- MRI contrasting agents:** **1-** Diamagnetic agents 2- Paramagnetic agents 3- Supermagnetic agents 4- Ferromagnetic agents **12.17- Basic imaging of MRI** **12.18- Comparison between CT and MRI scanners** ***CHAPTER THIRTEEN: BASICS OF NUCLEAR***		

	MEDICINE **13.1- Radioisotopes (radionuclides) and radioactivity:** 1- Radioisotopes (radionuclides) 2- Radioactivity 3- Radiation emission from radionuclides **13.2- Radionuclides production for nuclear medicine uses:** 1- Tc-99m production by nuclear reactor 2- F-18 production by the cyclotron **13.3- Characteristics of the diagnostic radionuclides used in nuclear medicine** **13.4- Construction of scintillation γ- camera (Anger camera):** 1- The collimator 2- Energy selector 3- The crystal 4- Photomultiplier tube (PMT) in scintillation crystals 5- Electronic circuitry 6- The computer **13.5- Nuclear medicine scanning:** 1- General procedure of nuclear medicine scanning 2- Techniques of nuclear medicine scanning 3- Application of nuclear medicine scanning **13.6- 2D scintigraphy** **13.7- Bone scintigraphy** **13.8- Myocardial scintigraphy (perfusion scan):** 1- Myocardial scintigraphy with exercise 2- Myocardial scintigraphy with medication **13.9- Hepatobiliary scintigraphy (cholescintigraphy):** 1- Normal movement 2- Slow movement 3- Not present movement **13.10- Pulmonary ventilation/perfusion scintigraphy (V/Q lung scan):**		

	1- Ventilation scintigraphy 2- Perfusion scintigraphy **13.11- Thyroid gland scintigraphy:** 1- Hyperthyroidism scintigraphy 2- Whole body thyroid scintigraphy **13.12- Parathyroid glands scintigraphy** **13.13- 3D emission tomography:** 1- Positron emission tomography (PET) 2- Single photon emission tomography (SPECT) **13.14- Positron emission tomography (PET)** **13.15- Single photon emission computed tomography (SPECT):** 1- SPECT procedure 2- Comparison between SPECT and PET **13.16- SPECT liver scan:** 1- Liver anatomy 2- Procedure of SPECT liver scanning 3- SPECT tests for liver health problems **13.17- Molecular scans** **13.18- PET molecular scan of Parkinson disease** **13.19- SPECT molecular scan of Parkinson's disease** **13.20- Hybrid scans** **13.21- PET hybrid scan:** 1- PET/CT scanning technique 2- PET/MRI scanning technique **13.22- SPECT hybrid scan (SPECT/CT)** ***CHAPTER FOURTEEN: PRINCIPLES OF RADIOTHERAPY*** **14.1- Types of radiotherapy (radiation therapy):** 1- Internal radiotherapy (brachytherapy) 2- External beam radiotherapy **14.2- Cancers and tumors:** 1- Multiple characteristics classification of cancers		

	2- Histological classification of cancer 3- Site classification of cancer **14.3- Radiation dose** **14.4- Radiation effect on DNA:** 1- Direct effect of radiation on DNA 2- Indirect effect of radiation (free radicals effect) on DNA **14.5- Brachytherapy technique:** 1- Brachytherapy procedure 2- Applicators of radionuclide implantation 3- Advantages of brachytherapy **14.6- Types of dose rates in brachytherapy:** 1- Low dose rate (LDR) brachytherapy 2- Medium dose rate (MDR) brachytherapy 3- High dose rate (HDR) brachytherapy 4- Pulsed dose rate (PDR) brachytherapy **14.7- Types of brachytherapy:** 1- Temporary brachytherapy 2- Permanent brachytherapy 3- Contact brachytherapy 4- Interstitial brachytherapy **14.8- Head and neck cancer brachytherapy** **14.9- Skin cancer brachytherapy** **14.10- Lung cancer brachytherapy (endobronchial therapy)** **14.11- Cervical cancer brachytherapy:** 1- Risks of the cervical cancer 2- Applicators of cervical brachytherapy 3- Brachytherapy dose rate for cervical cancer **14.12- Prostate cancer brachytherapy:** 1- Prostate gland 2- Prostate cancer 3- Prostate cancer brachytherapy procedure **14.13- Partial breast brachytherapy** **14.14- Eye cancer brachytherapy (plaque therapy):**		

	1- Eye cancer 2- Plaque therapy procedure **14.15- External beam therapy (EBT) (external radiotherapy):** 1- EBT dose fractionating 2- General procedure of external radiotherapy 3- Conformal radiotherapy **14.16- Mechanism factors of cancer cells proliferative:** 1- Cancer cells repair 2- Cancer cells reoxygenation 3- Cancer cells repopulation 4- Stage of cancer cell division cycle **14.17- Increasing of dose fractionating effect on cancer cells proliferative:** 1- Hypofractionated radiotherapy 2- Hyperfractionated radiotherapy 3- Accelerated fractionated radiotherapy **14.18- Techniques of the external radiotherapy** **14.19- Image guided radiotherapy (IGRT) technique** **14.20- 3D conformal radiotherapy (3D CRT)** **14.21- Intensity modulated radiotherapy (IMRT):** 1- Planning of IMRT 2- Procedure of IMRT 3- Advantages and disadvantages of IMRT **14.22- Volumetric modulated arc therapy (VMAT)** **14.23- Tomotherapy** **14.24- Stereotactic radiotherapy (SRT):** 1- Plan of SRT 2- SRT cancer cases treatments **14.25- Gammaknife radiosurgery (gammaknife)** **14.26- Cyberknife radiosurgery (cyberknife):** 1- Cyberknife advanced functions 2- Side effects of cyberknife 3- Differences between cyberknife and gammaknife		

	14.27- X-ray radiotherapy: 1- Low energy X-rays 2- Orthovoltage X-rays 3- Megavoltage (deep) X-rays **14.28- Co-60 γ-rays therapy** **14.29- Electron beam therapy:** 1- Mega voltage X-rays (linear accelerator) 2- Mo betron linear accelerator **14.30- Protons radiotherapy:** 1- Cancer cells damage by the protons 2- Proton therapy procedure **14.31- The cyclotron** **14.32- The synchrotron** **14.33- Large hadron collider (LHC)** **14.34- Linac for image-guided hadron therapy (LIGHT):** 1- LIGHT proton therapeutic beam production 2- Advantages of LIGHT **14.35- Neutron beam therapy:** 1- Delivery of fast neutrons in radiotherapy 2- Leaf collimator 3- Advantages of neutron therapy **14.36- Breast cancer treatment by EBT** **14.37- Bowel cancer treatment by EBT:** 1- Rectal cancer radiotherapy 2- Colon cancer radiotherapy **14.38- Esophageal cancer treatment by EBT** **14.39- Head and neck cancer treatment by EBT** **14.40- Prostate cancer treatment by EBT:** 1- Radical radiotherapy 2- Fiducial markers 3- Spread prostate cancer radiotherapy **14.41- Brain cancer treatment by EBT**		

Course Description Form for Physiology

1. **Course Name:**
Physiology
2. Course Code:
PHYso204
3. Semester / Year:
2025-2026
4. Description Preparation Date:
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
2nd year: 120 hours theoretical + 90 hours practical (6 units)
7. Course administrator's name (mention all, if more than one name)
Name: Ass. Prof. Dr. qayser abd alhusain qayssarabdulhussein@uos.edu.iq
8. Course Objective

Course Objectives	✓ Determining the functions of the different body systems. ✓ Describe the mechanism of action of the various body systems and the accompanying sequence of physiological events. ✓ Estimation of the normal values of biological activities in relation to different biological conditions. ✓ Distinguish between the normal and abnormal functions of the different body systems. ✓ Clarify the amount of change in the natural functions of different body systems and accompanying some disease states. ✓ Expanding knowledge through periodicals, medical books and the Internet. ✓ Apply the basic scientific building blocks he has acquired to conduct scientific research and medical studies.

9. Teaching and Learning Strategies	
Strategy	✓ Small scientific circles. ✓ Discussions. ✓ Seminars. ✓ In-person and electronic blended education (via the Classroom platform).

10- Course Structure of Physiology /second year

Week	Lecture number	Lecture title	Details
1		Cell physiology (2 hours) The general and cellular basis of medical physiology	Cells structure, Cell Membranes:(plasma membrane), cell membrane receptors, Gated channels, Cell Organelles
		Molecular motors, Intercellular Connections and Intracellular communication	Molecular motors, Type and Functions of molecular motors Cell adhesion molecules (CAMs), the extracellular matrix, and specialized cell junctions. Electrical and chemical Communication, Apoptosis
		Body fluid Part (2 hours)	Total body water, distribution of body water, function of body water. Composition of ECF & ICF, distribution of fluid volume between plasma & the interstitial fluid. Osmosis, osmotic pressure and osmolarity of the body fluids, Tonicity
		Forces producing movement of substances between compartments.	Facilitated diffusion: Active transport, Sodium-Potassium Pump Formation of Interstitial Fluid and Lymph The primary factors (Starling Forces) that determine fluid movement through the capillary membrane. Edema, Dehydration,

			Overhydration
2		**Excitable Tissue: (8 hours)** **Nerve**	**Excitable cell, Resting membrane potential (RMP), Action potential , Conduction of the Action Potential, Re-establishment of the normal resting membrane potential, Propagation of the action potential, Rhythmicity, Refractory Period**
		Neurons	**Neurons, Glia, Classification of nerve fibers, , The functional classification of neurons**
		Synaptic and neuromuscular transmission	**Synaptic transmission, Physiological anatomy of the synapse, Transmission of signal or impulse across the synapse, The neuromuscular junction, Myasthenia gravis, Lambert-Eaton syndrome**
		Neurotransmitters	**Classes & function of Neurotransmitters**
3		**Excitable Tissue: Muscle cells**	**Muscle cells, skeletal muscle, Properties of skeletal muscles, Structural organization of muscle, Microscopic Anatomy of Skeletal Muscle**
		Mechanism of muscle contraction , Excitation-contraction coupling	**Mechanism of muscle contraction, Excitation-contraction coupling, Muscular dystrophy, The source of energy for the muscle**
		The motor unit	**The motor unit, red muscle, white muscle, Types of muscle contraction, Skeletal muscle tone**

		The smooth muscles	**The smooth muscles, Action Potentials in Smooth Muscle, The junction between the nerve terminals and smooth muscles, Mechanism of smooth muscle contraction**
4		**Nervous System (20 hours)** **Introduction to nervous tissue**	**Structure of the Nervous System, Nervous System Function, Central Nervous System, Brain, Cerebrum, Subcortical structures,**
		Diencephalon, Brainstem, Central Nervous System: Spinal Cord, Peripheral Nervous System	**midbrain and hindbrain, cranial nerves, Cerebellum, spinal cord, somatic nervous system**
		Autonomic Nervous System	**Introduction and definition, the autonomic reflex action and its comparison to the somatic reflex, sympathetic and parasympathetic nervous systems**
		Neurotransmitters of the Autonomic Nervous System	**The concept of membrane receptor** **Chemical transmission in the autonomic nervous system**
5		**Functions of the Autonomic Nervous System**	**The "fight-or-flight" Response, rest and digest condition, Regulation of Autonomic Nervous System Activity**
		Blood-Brain Barrier, and Cerebrospi	**Blood-Brain Barrier, General Properties of the BBB: functions of the BBB, Meningitis. Cerebrospinal fluid**

		nal Fluid	**(CSF) formation, function , circulation and drainage**
		Sensory system	**Type of Sensory receptors, General properties of receptors. Types of sensations, Tactile sensations, Pain sensation , Pain suppression system, Thermal Sensations**
		Somatosensory Pathways or Ascending pathway	**The dorsal column pathway (medial lemniscal system).** **The anterolateral pathways (spinothalamic pathway).** **Dorsal and ventral spinocerebellar tracts** **Signs of lesions of the central sensory pathways**
6		**Higher interpretation of sensory signals:**	**Primary sensory areas.** **Sensory association areas.** **Wernicke's area. Alexia, Agraphia, fluent aphasia**
		Somatomotor functions of the CNS, Reflexes	**Somatomotor pathway or Descending pathways** **Reflexes, The spinal cord reflexes, Scratch reflex.** **Flexor withdrawal reflex, Abdominal reflex., Planter reflex, Cremasteric refle**
		The higher motor control systems	**The pyramidal system, The extrapyramidal system, cerebellum** **The primary motor cortex, The supplementary motor cortex, The premotor**

			cortex
		The basal ganglia, The thalamus, The Limbic System,	**The main functions of basal ganglia, functions of thalamus, The primary structures within the limbic system**
7		**Hypothalamus, Amygdala**	**Functions of the hypothalamus, Functions of the Amygdala**
		Higher functions of cortex	**The memory, Language and Speech, Brain waves , Sleep**
		The Special Senses **Vision:**	**The principal structures of the eye, Intraocular Fluids (IOF): Principles of Optics, The Eye & Light Refraction, Errors of Refraction, Physiology of Retina, The Visual Receptors, Photochemistry of Vision**
		Rhodopsin-Retinal Visual Cycle, Color Vision	**Rhodopsin-Retinal Visual, Reformation of Rhodopsin, Dark & Light Adaptation, Color Vision, Color blindness, Visual Pathways, The Fields of Vision, Pupillary light reflexes**
8		**Hearing**	**Functional anatomy of the ear, Inner ear, Organ of Corti, Sound Waves, Types of Sound Conduction, Functions of the Tympanic Membrane & Auditory Ossicles, Hair Cell Receptor, Central Auditory Pathway , Determination of Sound Frequency, Deafness**
		Equilibrium	**vestibular system. Utricle and saccule, Central Vestibular Connections, Mode of Action of the**

			Semicircular Canals, Auditory reflexes
		Smell	**Olfactory Receptors & Pathways, Physiology of Olfaction -Mechanism of Excitation of the Olfactory Cells, Degree of Stimulation of the Olfactory Cells**
		Taste	**Taste Receptor Organs and Pathways, Physiology of Taste, Primary Taste Sensations**
9		**Blood Physiology (14 hours)** **blood**	**Characteristics of Blood, Functions of the blood, Plasma, Functions of plasma proteins, Hemopoiesis**
		Red blood cells (erythrocytes)	**Red blood cells, Erythropoiesis, Erythrocyte metabolism, The red cell membrane**
		Hemoglobin (Hb)	**Hemoglobin structure, Functions of Hb, Hb synthesis Normal types of Hb, Variant forms of normal Hb, Myoglobin**
		Genetic abnormalities of Hb	**Sickle cell anemia (HbS), Hemoglobin C disease** **Thalassemias,**
10		**Destruction of red blood cells and catabolism of hemoglobin**	**Destruction of red blood cells and catabolism of hemoglobin, Iron metabolism**
		Anemia &Polycythemia	**Classification of anemia, consequences of Anemia, type of Polycythemia, dangers of polycythemia**
		White blood cells (leukocytes)	**White blood cells, genesis of W.B.C., morphology & general**

			properties, classification &functions. Leukocytosis and leukopenia
		Immunity	Innate immunity, Inflammation, Acquired (Adaptive) Immunity, Humoral immunity Cellular or cell–mediated immunity, Antigen Presentation
11		Examination	
		Antibodies & autoimmune diseases	Antibodies, classes of antibodies, Tolerance, autoimmune diseases, and graft rejection, Allergens
		Blood typing & transfusion	Blood groups (ABO system) and transfusion reaction, The Rh system, Erythroblastosis fetalis
		Hemostasis Platelets	Platelets (thrombocytes), Platelet production, functions of platelets, Hemostasis
12		Blood coagulation	Clotting Factors, Coagulation mechanisms, intrinsic and extrinsic pathways Clot retraction
		Fibrinolysis	Intrinsic activation, Extrinsic activation, The anticlotting mechanisms
		Abnormalities of Hemostasis	Vascular disorders, Platelet disorders, thrombocytopenic purpura Disorders of blood coagulation, Hemophilia
		Physiology of Cardiovascular system	The cardiovascular system, The heart, Functions of the heart, The valves of the

		(20 hours) **Introduction to cardiovascular physiology**	**heart, Cardiac Muscle**
13		**The cardiac cycle**	**Electrical events of the cardiac cycle, The atrial conductive system, SA nodal action potentials, The mechanical events of the cardiac cycle**
		End-Diastolic Volume, End-Systolic Volume, Stroke Volume and cardiac output	**End-Diastolic Volume, End-Systolic Volume, Stroke Volume and cardiac output**
		Regulation of the cardiac output,	**Regulation of Stroke Volume, Regulation of heart rate**
		Heart Failure	**Heart Failure, Types of heart failure** **Cardiac muscle does not undergo fatigue**
14		**Heart Sounds**	**Type of Heart sounds, Heart murmurs**
		Electrocardiogram (ECG)	**A standard ECG 12 leads, Bipolar standard limb leads, 3 unipolar limb leads, unipolar chest leads, Anatomy of a 12-Lead EKG**
		Atrial Depolarization and Ventricular Depolarization	**Inscription of the P-wave, Sequence of Ventricular Depolarization**
		Vectors and Mean Electrical Axis	**Vectors and Mean Electrical Axis, Einthoven's Triangle Method for determining cardiac**

			Axis.
15		**Calibration of electrocardiograph**	**Calibration of electrocardiograph, Measure important intervals and segments, Steps for ECG Description**
		ECG waves	**Assess the P waves, PR Interval, QRS Complex, ST Segment, T wave [Ventricular repolarization].**
		Heart axis	**normal cardiac axis, Axis determination** **Right and left ventricular hypertrophy, Bundle Branch Blocks**
		Cardiac arrhythmias	**Abnormal sinus rhythms, Atrial Arrhythmias, Ventricular arrhythmias, Conduction arrhythmias**
16		**The Circulatory system**	**The function of the circulation, Functional Parts of the Circulation**
		Flow, Pressure, & Resistance	**Flow, Pressure, & Resistance, Factors affecting resistance , Arterial Blood Pressure, Venous Blood Pressure**
		Cardiovascular Regulatory Mechanisms	**Neural Control of the Cardiovascular System, Cardiac Innervation, Baroreceptors**
		Regulation of blood flow	**Local mechanisms, Systemic mechanisms, Short-term blood flow control, Long-term blood flow control, Nervous mechanisms. Humoral mechanisms**
17		**Regulation of arterial blood**	**Rapidly acting mechanism (short-term regulation),**

		pressure (BP):	**Intermediate acting Mechanisms Slow acting mechanism (long-term regulation) Shock, Types and Stages of shock**
		The pulmonary circulation	**The pulmonary circulation, The cerebral circulation The cerebral circulation The splanchnic circulation Cutaneous Circulation**
		Placental and Fetal Circulation	**differences between the fetal and postnatal circulations.**
		Physiology of Respiratory system (10 hours)	**Physiological functions of the lungs**
18		**Physiology of Respiratory system**	**Process of respiration: mechanics of breathing.**
			Lung volumes and capacities.
			Compliance of the lung, role of surfactant.
			Pulmonary and alveolar ventilation.
19		**Physiology of Respiratory system**	**Transport of O2 by the blood, oxygen dissociation curve, co2 dissociation curve**
			Transport of CO2 by the blood. hypoxia, hypercapenia and hypocapenia, effect of exercise
			Role of the respiratory system in acid- base regulation. Types of disorders, metabolic and respiratory
			Regulation of

			breathing: voluntary and involuntary control
20		**Physiology of Respiratory system**	**Regulation of breathing: ventilatory responses to CO2 rise and O2 lack.**
		Examination	
		GIT physiology (12 Hour)	**Anatomy, Structure & Function Of G.I.T.**
			Types Of GIT Smooth Muscle Contractions &The Enteric Nervous System
21		**GIT physiology**	**Salivary Glands**
			Swallowing (Deglutition).
			Stomach Function &Regulation of Gastric Emptying (Pyloric Pump) .Gastric Secretion. (Gastric Hcl Secretion), The Functions of Hcl & Mechanism of Hcl Secretion.
			Phases of Gastric Secretion, Inhibition of Gastric Secretion (Negative Feedback Mechanism).
22		**GIT physiology**	**Small Intestine (Anatomy, Function, Intestinal Secretions)**
			Pancreas & Gall Bladder
			Carbohydrate Digestion, Fat Digestion, Protein Digestion
			Absorption of Proteins, Carbohydrates and Fat.
23		**GIT physiology**	**Large Intestine**

			Liver.
		Endocrinology (14 hours)	**Introduction (Endocrine Function, Synthesis of Hormone)**
			Peptide &Steroid Hormone Production and Secretion, Mechanism of Hormone Action.
24		**Endocrinology**	**Hypothalamic Hormones**
			Anterior Pituitary Gland Hormones
			growth hormone
			Posterior Pituitary Gland Hormones
25		**Endocrinology**	**Thyroid Gland &Hormones (Part I)**
			Thyroid Gland &Hormones (Part II)
			Pancreas (Part I)
			Pancreas (Part II)
26		**Endocrinology**	**Diabetes Mellitus, Metabolic Syndrome, Hypoglycemia**
			Adrenal Gland (Medulla).
			Adrenal Gland (Cortex).(Part I)
			Adrenal Gland (Cortex).(Part II)
27		**Renal Physiology (10 hours)**	**Introduction , anatomy and function of nephron**
			Renal Circulation and Glumerular Filtration
			Tubular Reabsorption

			Tubular Secretion
28		**Renal Physiology**	**Water Excretion by the Kidneys**
			Plasma clearance and measure of GFR
			Renal Mechanism of Acidification of Urine and Its Significance in The Regulation of pH
			Regulation of Body Fluid Volume
29		**Renal Physiology**	**Counter current exchange mechanism**
			Diuresis and diuretics
		Reproductive Physiology	**Male Reproductive Physiology**
			Female Reproductive Physiology.
30		**Reproductive Physiology**	**Physiology of Pregnancy and lactation**
		Body temperature regulation	**Normal temperature and set-point, heat production**
			Heat loss, hypothalamic regulation of body temperature fever and hypothermia
		Overview & Discussion	

Practical: 90 hours/ year

Week	Lecture title	Details
1	Body fluid	Body fluid Type of fluid &Edema
2	Blood Physiology	1.Introduction & Osmotic fragility test (demonstration)
3		RBC count and PCV
4		Hemoglobin & Blood Indices
5		WBC count Blood Film (WBC differential count
6		Blood group Lab. ESR
7		Bleeding time Platelet count
8		Capillary Hess test Clotting time
9		Prothrombin time (PT) Activated Partial Thromboplastin Time (APTT)
10	Cardiovascular	E.C.G
11	system	Measuring Blood pressure and pulse.
12		examination
13	respiratory system	Pulmonary function test

14	**Cardiopulmonary resuscitation**	**Cardiopulmonary resuscitation**
15	**Vital sign**	**Vital sign**
16	**Nerve- muscle physiology**	**Recording of simple muscle twitch (frog sciatic nerve gastro-cnemius muscle preparation) .** **Effects of temperature on simple c.muscle twitch**
17		**Effects of repeated stimuli on muscle contraction** **Effects of fatigue on muscle contraction.**
18	**Nervous System**	**Cranial Nerves. (Part 1)**
19		**Cranial Nerves. (Part 11).**
20		**Visual Test**
21		**Examination of the Vestibulocochlear Nerve, Hearing**
22		**Examination of the Motor and Sensory Systems**
23		**EMG and nerve conduction study** **EEG** **Seminar**
24	**G.I.T**	**Effect of drug on isolated mammalian intestine** **Ultrasound Exam.** **Seminar**
25		**Examination**
26	**Reproductive physiology**	**Seminal Fluid Analysis** **Seminar**
27		**Pregnancy Test**
28	**Endocrinology**	**Clinical Lab In Endocrine Seminar.**
29		**Glucose Tolerance Test**

		Fasting Blood Sugar Exam. (F.B.S)

Description Form Medicine

1. **Course Name:**
Medicine
2. **Course Code:**
MED305, MED401, MED5510 .MED601.
3. **Semester / Year:**
2025-2026
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Actual mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
• third level: Theoretical 45 hours, practical 60 hours • The fourth stage: Theoretical 120 hours, practical 120 hours • Five stage : Theoretical 75 hours, practical 60 hours • Sixth stage/Practical 360 hours
7. **Course administrator's name (mention all, if more than one name)**
Ass. Prof.sadiq lafta Ass. Prof.oday abd alrazaq

9. Teaching and Learning Strategies	
Strategy	1- Giving theoretical lectures. 2- In-person and electronic blended learning (via the Classroom platform). 3 - Use of computers - plasma screens - modern scientific equipment - audio-visual devices 4- Clinical rounds 5- Educational seminars, discussions and seminars. 6- Practical and clinical application in teaching hospitals.

10. The structure of the course for medicine /third academic level

Week	Unit or Subject name	Learning Methods	Evaluation
1	**A. Theoretical teaching:** **The total number of lecture is 60 which cover of the following** **1. common symptoms and signs in medicine as an introductory lectures, (10 Lec.)** Including common signs and symptoms of the cardiovascular system, respiratory system, gasterointestinal system, genitourinary system and central nervous system. **2.Clinical immunology** **(9 Lec.)** Functional anatomy &investigations of immune system, Innate &adaptive immune system, Immune deficiency, Inflammatory response, Autoimmune disorders, Allergic disorders, Anaphylaxis & angioedema, Transplantation& graft rejection. 3. **Water&electrolytedisturbances: (9 Lec.)** Normal physiology, function of the nephron and water and electrolytes absorption, diuretics(classifications , side effects and diuretic resistance, Sodium disorders, Potassium disorders, calcium disorders, Magnesium and phosphate disorders, Acid base balance disorders, metabolic acidosis, Metabolic alkalosis, respiratory acidosis and respiratory alkalosis causes, clinical features, diagnosis and treatment. 4. **Clinical genetic (5**	Lecture + practical	Exam

	Lec.) Clinical application, classification, investigations, Autosomal disorders, X linked disorders, gene therapy. **5. Nutritional disorders** **(10 lec.)** Energy balance, response to under and over weight, Summery of foods containing fat, proteins and carbohydrate, Obesity, Malnutrition, Malnutrition in hospital, Disease of micronutrient (Vitamins and minerals) – Vitamin A, Vitamin D,E,K, Water soluble vitamin (B1,B2,Naicine), Vitamin B6,B12,Folic acid and Vitamin c, Mention every vitamin with the source of it and disease result from its deficiency, In organic nutrient : Flouride ,copper ,selenium ,zinc , calcium, phosphate , iodine, Summary about inorganic nutrient and disease caused by deficiency and excess of each one. **6.Endemicandhelminthicinfections** **17 Lec.)** Presenting problems in infectious diseases, presentations of fever, kin rash, lymphadenopathy and spleenbomegaly, Pyrexia of unknown tiology, Bacteremia and septicemia, Antimicrobial therapy, ntibiotics, antiviral, antifungal and antihelmenth. Amoebiasis, iardiasis, Malaria, Visceral Leishmaniasis, Cutaneous and mucosal eishmaniasis, African and American Trypanosomiasis, oxoplasmosis, Infections caused by helminthes, Classifications, ncylostomiasis, pathology, clinical features, diagnosis and treatment, scariasis and Enterobiasis, clinical features, diagnosis and treatment chistosomiasis, pathology, clinical features, diagnosis , treatment and revention, . Taenia saginata, Taenia solium, cysticercosis and hydatid isease. B. Clinical training: **The clinical training** hours are 60 hours. The training introduces the students in groups to the bedside in the wards to be familiar with hospital environments and to begin to approach problem oriented history taking and the general examination		

Medicine /fourth academic level

10. The structure of the course for medicine /fourth academic level

Week	Unit or Subject name	Learning Methods	Evaluation
1	1. **Gastrointestinal (18 Lec.)** including: mouth and pharynx, common presentations, investigations, diseases of the esophagus, gastritis, peptic ulcer diseases, upper GIT bleeding, malabsorption, diarrhea, inflammatory bowel diseases, gastric tumors, colonic tumors, lower GIT bleeding, irritable bowel syndrome 2. **Liver and hepatology (12 Lec.)** including: introductions, investigations, common presentations, Jaundice, hepatitis, liver cirrhosis, hepatic encephalopathy, diseases of the gall bladder, diseases of the pancreas. 3. **Endocrine and diabetes mellitus (30 Lec.)** Diabetes mellitus, Diagnosis, Types, Risky group, prevalence and prevention, Clinical presentation, aim of treatment, treatment, Oral hypoglycemic agents, Insulin preparation ,problems associated with insulin injection, Hypoglycemia, Treatment and prevention of Hypoglycemia, Diabetic keto acidosis Hyperosmolar non-ketotic comaLactic acidosis, Diabetic complication ,Retinopathy, eye disease, blindness ,peripheral neuropathy, diabetic foot, Diabetic nephropathy,	Lecture + practical	Exam

	Cardiovascular disease in Diabetic patient lipid and Diabetes mellitus, Metabolic disease: Disorder of lipid metabolism, Presentation of hypothalamic and pituitary disease and out lines of their treatment, Hypopituitarism Acromegally and giganism, Hypothyroidism, Hyperthyroidism, Goiter, Thyroid eye disease, thyroid cancer, thyroid special condition, Parathyroid gland ,calcium metabolism and serum calcium abnormality, Thirst axis and Diabetes insipidus, Adrenal gland and its investigations, Addison's disease, Cushing's Syndrome, Glucocorticoid (drugs uses and its side effect), Endocrinology of blood pressure control, Multiple endocrine neoplasia 4. **Cardiovascular (30 Lec.)** including: introductions, common presentations, investigations, chest pain, arrhythmias, heart failure, ischemic heart diseases, valvular heart diseases, rheumatic fever, diseases of the myocardium, cardiomyopathies, diseases of the pericardium, infective endocarditis, hypertension, diseases of the aorta, tumors of the heart. 5. **Respiratory system (18 Lec.)** Anatomy, physiology of respiratory diseases, Clinical features of respiratory systems, Bronchial asthma, Chronic obstructive pulmonary disease, Brochioectasis, Upper respiratory tract infection, Pneumonia, Tuberculosis, Bronchial tumors. Disease of pleura , diaphragm and chest wall, Pulmonary vascular disease , Interstitial lung disease, Disease of pleura ,diaphragm and chest wall. 6. **Bacterial infections (12 Lec.)** including: introductions, investigations, classifications, streptococcal infection, infection caused by Staphylococci, Toxic shock syndrome, tetanus, clostridia infections, tetanus, leptospirosis, listeria monocytogen infections enteric fever, Brucellosis, gram negative infections, gonococci, Syphilis , leprosy		

Medicine /fifth academic level

10. The structure of the course for medicine /fifth academic level		
Unit or Subject name	**Learning Methods**	**Evaluation**
A. Theoretical teaching: The total number of lectures is 180 which cover the following:	Lecture + practical	Exam

1. Central nervous system (30 Lec.) including: introductions, investigations, common signs and symptoms, headache, migraine, epilepsy, cerebrovascular accident, multiple sclerosis, motor neuron diseases, neuromuscular disorders, myopathies, peripheral neuropathy, extrapyramidal systems diseases, Parkinson disease, involuntary movement, cerebellar diseases,meningitis, encephalitis, brain tumors, comma. 2. Nephrology (15 Lec.) including, introductions, signs and symptoms, investigations, renal biopsy, glomerular disorders, glomerulonephritis, Nephrotic syndrome, urinary abnormalities, interstitial nephropathy, urinary tract infections, cystic kidney diseases, renal tumors, Acute renal failure, prerenal, acute tubular necrosis, post renal failure, chronic renal failure, renal replacement therapy, dialysis therapy, renal transplantiation. 3. Haematology (18 Lec) including: introduction, common presentations, investigations, blood film morphology, anemias, types, classifications clinical presentations, management, leukemia's, classifications, clinical presentations, diagnosis, management, lymphoma, myeloprolifrative disorders, multiple myeloma, platelet disorders, bleeding tendencies, coagulation disorders, 1. Viral infections (12 lec.) including: introduction, classification, investigations, Mumps, Herpes simplex infections, Herpes zoster, Infectious mononucleosis, cytomegalo virus infection, Rabies, HIV infections, AIDS. 2. Geriatric medicine (8 Lec.): introduction, terminology, normal physiological changes, aging, common clinical problems, investigations, special care, polypharmacy, frequent falls, postural hypotension, acute confusion, drippling, 3. Toxicology (8 Lec.): introduction, general presentations, general principles of management, paracetamol intoxications, digoxin toxicity, aspirin toxicity, organophosphorus intoxications, opiate over use, kerosene poisoning, snake bite 4. Clinical Pharmacology (14 Lec.); introduction, basic information,		

drug prescriptions, drug dosage, drug interactions, special situations ((pregnancy, renal failure, hepatic insufficiency)) , corticosteroid therapy, immunosuppressant		

Description Form Gynecology and obstetrics

1. **Course Name:**
Gynecology and obstetrics
2. **Course Code:**
OBGY405 OBGY406 GYN511 OBGY 603
3. **Semester / Year:**
2025 / 2026
4. **Description Preparation Date:**
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
The fourth stage 60 hours (30 theoretical hours + 90 practical hours) The fifth stage 60 hours ,60 practical hours) The sixth stage: 360 hours (360 hr)
7. Course administrator's name (mention all, if more than one name)
Dr.rahab algalibi **Dr.aliaa algalibi** **Dr.warkaa mared**
8. Course Objectives

Course Objectives

1. Acquire the knowledge and skills necessary to provide health maintenance and disease prevention for women.
2. Develop the cognitive and technical skills needed in outpatient clinics, emergency rooms, inpatient units, operating rooms and delivery rooms to manage obstetrics and gynecology problems.
3. To gain an understanding of the foundations of the basic sciences of clinical obstetrics and gynecology that will form the basis of evidence-based clinical practice and lifelong continuing medical education.
4. Develop the personal skills necessary to deal effectively with patients, other health professionals, and colleagues, and to work not only as students but also as teachers.

5. To gain an understanding of health care systems and management so as to advocate and deliver the highest quality patient care
9. Teaching and Learning Strategies

Strategy	**.:Theoretical lectures and practical application** **2. Weekly seminars and discussions** **3. Small group discussions suggest solutions to individual and societal problems**

Description Form Gynecology and obstetrics

10- Structure of the text and theoretical and practical obstetrics / fourth academic level

No	Lecture	Objectives
١.	Physiological change in pregnancy 2L	to know the symptoms and the physical finding of each systems in the body during pregnancy to know how the body adapted to the fetus and helping us in diagnosis of pregnancy and its complication
٢.	Fertilization & implantation	This lecture explain spermatogenesis and oogenesis then normal fertilization regarding time and site .Also normal implantation
٣.	Fetal development & growth	understanding of normal development, growth, maturation and understanding the complications that may arise in pregnancy for the neonate. Also risks of preterm delivery on infant
٤.	Placenta &amniotic fluid	The lecture show normal placentation and abnormal placentation that cause pregnancy complication such as placenta previa ,accrete and IUGR
٥.	Antenatal Care L1&L2	For follow up the pregnant &early diagnosis &deal the complication
٦.	Vomiting in pregnancy	Should be known the different causes of nausea and vomiting and should be differentiated from the hyperemsis gravidarum . The complications of the hyperemsis gravidarum .
٧.	Abdominal pain in pregnancy Prenatal diagnosis	To differentiate between physiological &pathological causes This lecture discuss why prenatal diagnostic tests may

		be performed and the types of non-invasive and invasive tests available. It will discuss also factors which should be taken into consideration prior to offering testing.
٨.	Anatomy of female pelvis and fetal head	Revise your knowledge of fetal head anatomy and pelvic anatomy
٩.	Labor & physiology of labor	Understand the concept of normal lobar and its management based on clinical signs and potential pathology.
١٠.	The mechanism of labor	Revise your knowledge of the cardinal movement of fetus during parturition
١١.	Management of labor L1,L2&L3	-Be confident to interpret a partogram and formulate plan based on pattern observed. -Be able to define findings on vaginal examination accurately and communicate these in written form. -Be confident to interpret a partogram and formulate plan based on pattern observed. Be able to define findings on vaginal examination accurately and communicate these in written form.
١٢.	Abnormal labor and dystochia L1&L2	Be able to manage delay in lobar and to use syntocinon appropriately Appreciate the limitation of augmentation with oxytocin and appropriate timing of alternative management strategies.
١٣.	Portogram and assessment of fetal well-being in Labor	Know the risk factors for fetal compromise, how they can be recognized either antenatally or in early lobar. Be confident to interpret CTG specially for those babies need immediate delivery. Be aware of different technique available of assessing fetal well-being in lobar.

١٤.	Male presentation L1&L2	Be familiar with the different type of mal presentation Knowledge about management of each type present in emergency situation Risk and complication of these mal presentation.
١٥.	Breech presentation L1&L2	Be proficient in vaginal breech delivery Knowledge the relative risks and benefit of breech delivery. Revise your knowledge of the process of parturition with breech delivery.
١٦.	Male position L 1&L2	To know the way to diagnose mal position The way of management The accurate time of intervention and choosing appropriate management
١٧.	Partogram and Assessment of fetal well-being in labour Cord prolapsed and cord presentation	Know the risk factors for fetal compromise, how they can be recognized either antenatally or in early lobar. Be confident to interpret CTG specially for those babies need immediate delivery. Be aware of different technique available of assessing fetal well-being in lobar. Knowledge about the life threaten emergency endanger the fetus The correct way to handle such emergency
١٨.	Abnormal third stage of labour& Complication of the Third stage of Labor Post Partum Hemorrhage L1,L2 Oligo .& Polyhydramnios	To know how can deal with its complication To know its underlying causes &management
١٩.	Medication in pregnancy Multifetal pregnancy	To know the physiological changes of pregnancy that can alter the drugs pharmacokinetics
٢٠.	Multifetal pregnancy	To know the type &complication
٢١.	RH-isoimmunization L1,L2	Definition of Rh-Iso immunization Pathophysiologyof Rh-Iso immunization . Potential sensitizing events for Rh-disease .

		Factors determined the occurrence of Rh-Isoimmunization .
٢٢.	APH L1&L2	Causes of APH &management
٢٣.	Anemia L1&L2	Type of anemia & management
٢٤.	Preterm labor Rom	Causes, clinical feacture &management
٢٥.	Hypertensive disease in pregnancy L1&L2	avoidance and early detection of this common complication of pregnancy, its risk factor and what are the effects on fetal growth and maternal outcome.
٢٦.	Bleeding disease in pregnancy Thromboembolic in pregnancy	How can deal this disease in pregnancy &its effect on pregnancy outcome &effect of pregnancy on it Risk factors, prevent, management.
٢٧.	DM L1&L2	How can deal this disease in pregnancy &its effect on pregnancy outcome &effect of pregnancy on it.
٢٨.	IUGR IUD Thyroid disease in pregnancy	Should known the aetiology and types of the IUGR fetuses . Should known the pathophysiology of the IUGR . How can investigate them &how can manage them appropriately the first and ongoing priority in management is emotional & psychological support of the parents and family The second priority is to find an explanation The third priority is to implement an appropriate management strategy for future pregnancies . How can deal this disease in pregnancy and it is effect.
٢٩.	Renal disease in pregnancy	early detection of renal disease that are occur during pregnancy and how to modify the management of renal disease in pregnancy to improve fetal and maternal outcome

٣٠.	Jaundice disease in pregnancy Neurological disease in pregnancy	To know the causes of jaundice in pregnancy . How to differentiate between the causes . How we can manage each condition appropriately to prenatal and maternal morbidity and mortality to understand the effect of these disease and its medication on fetus and how to improve fetal and maternal outcome Types of cardiac disease. Pre – pregnancy counseling . Maternal& fetal risks. The stages of heart failure-New work heart Association (NYHA) classification High risk cardiac conditions.
٣١.	Cardiac disease in pregnancy	Antenatal management. Management during labor &in postpartum period. Management of heart failure &other specific conditions.
٣٢.	Autoimmune disease in pregnancy	Definition of autoimmune disease . How can be diagnosed during pregnancy The effect of autoimmune disease on the pregnancy outcome. The effect of pregnancy on the disease' s course
٣٣.	Shock & post op. collapse Analgesia and anesthesia in labor	A etiology &management what types of analgesia and anesthesia available in labor, its efficacy, complication and whether effect the progress of labor or not
٣٤.	Perinatal Infection L1&L2	Aetiology,prevention, management
٣٥.	Instrument delivery & episiotomy	Objective : how to know the need for instrumental delivery ,its prober application and avoidance of complication and make its use mimic spontaneous vaginal delivery
٣٦.	Induction of Labor C/S	Causes ,methods ,complication Indication ,complication

٣٧.	Ultrasound Premature rupture of membrane	This lecture showed the importance and uses of Ultrasound. That is used to date pregnancies and chart antenatal growth of the fetus To identify congenital abnormalities. Doppler can identify placental and fetal blood Antenatal tests of fetal well-being To discuss the clinical features ,diagnosis and management of premature rupture of membranes.
٣٨.	puerperium L1&L2	This lecture discuss Physiological changes. Puerperal disorders and their management . Puerperal pyrexia. The breasts. Breast disorders and managements

Description Form Gynecology and obstetrics

10- Structure of the text and theoretical and practical Gynecology / fifth academic level

Week	The 5years lectures	Objective
1&2	Emberology and anatomy of female genital tract Intersex L1&L2	to understand the genital tract from external to internal and this is considering as the base line for understanding gynecological pathology and its subsequent management

		for early diagnosis and trying to improve outcome regarding feasibility of inducing pubertal changes, marriage and pregnancy
3	Cong. Abnormalities of genital tract L1,L2	Understand the classification of Mullerian anomalies. Know about the first line investigations for Mullerian anomalies and treatment available.
4	Puberty physiology Puberty disorders	Understanding the normal changes in puberty genital tract during Delayed & early puberty
5	Menstrual cycle L1& L2	It is important to have an understanding of the physiology of the normal menstrual cycle to understand the causes of any abnormalities , and also to tackle problems , such as infertility and the prevention of unwanted pregnancy . This lecture aims to describe the mechanisms involved in the normal menstrual cycle , with emphasis on the clinical relevance of each phase .
6	Dysfunctional uterine bleeding and heavy menstrual loss Primary amenorrhea	to confirm this bleeding is really abnormal and to learn what are the measures to reduce blood loss and treating under lying pathology causes ,management
7	Secondaryamenorrhea PCOS syndrome	causes ,management
8	Miscarriage L1,2 Ectopic pregnancy	How can differentiate the miscarriage from other early pregnancy complications . Aetiological factors. Pathological-Anatomy. Clinical varieties of miscarriage &their management The lecture discuss the definition ,risk factors, diagnosis and lines of management of ectopic pregnancy
9	Gestationl trophoblastic disorders L1&L2	Understand the pathogenesis. Have good knowledge of gynecological diagnosis and management. Have an appreciation of the need for monitoring and medical intervention

10	Persistence Gestationl trophoblastic disorders L1&L2	Be able to counsel woman with Gestationl trophoblastic disorders Be able to recognize the clinical features of Persistence Gestationl trophoblastic disorders. Know the different modalities of treatment which available.
11	Fertility control L1&L2	Type of contraceptive &how can use ,advantage &disadvantage
12	Lower genital tract infection L1&L2	Revise the cause of pelvic pain. Understand the pathological course of sexually transmitted infections (STIs). Understand how to investigate and manage(STIs) when encountered in the gynecological setting.
13	Upper genital tract infection pelvic inflammatory diseases(PID). Chronic pelvic pain	Revise the cause of pelvic pain. Know the evidence for diagnosing , treating and following up pelvic inflammatory diseases(PID). Know which infections of genital tract are transmitted sexually. Know the etiology of Chronic pelvic pain. Know the different strategies of management of Chronic pelvic pain
14	Subfertility L1&L2	This lecture explain the definition ,types, causes, investigations and lines of treatments for both male and female infertility

15	Assisted reproductive technology Menopause L1	The lecture discuss definitions and types of assisted reproductive technology .Ovarian stimulation and follow up of patient The menopausal consultation. Management options. Risks & benefits of each option. Practical considerations for prescribing HRT. New developments.
16	Menopause L2 Post menopausal bleeding	The menopausal consultation. Management options. Risks & benefits of each option. Practical considerations for prescribing HRT. New developments. The definition of the menopausal bleeding (PMB) . Underlying aetiology . Its management (History ,examination ,investigations ,treatment
17	Pelvic organs prolapsed L1,2	The aetiology, presentation,diagnosis
18	Pelvic organs prolapsed L3	Management &prevention to exclude underlying pathology, how to reassure the patient, reduce the pain and improve the quality of life

	Primary and Secondary dysmenorrhea	
19	Premenstrual tension syndrome Benign disease of uterus	Know the definition of PMS. Know the prevalence of PMS. Understand the assessment used in PMS. Be aware of alternative therapies. Know the non hormonal approaches to management. Know the hormonal approaches to management Types, presentstion ,management
20	Endometriosis	Understand the pathogenesis and clinical presentation of endometrosis. Know the principal medical therapies used in endometriosis associated pain. Know the surgical principles underlying the conservative and medical approaches to endometriosis surgery. Be able to recognize the histological appearance of adenomyosis.

	adenomyosis	Be aware of clinical features and epidemiology. Know the diagnostic techniques. Understand the principles of medical and surgical treatment
21	Endometrial cancer L1,2	Revise your knowledge of pelvic anatomy. Understand the epidemiology and etiology of endometrial cancer. Understand the principles of carcinogenesis and pathology. Be able to describe the diagnostic and staging techniques of endometrial cancer. Be able to describe the management of early and advanced, recurrent disease.
22	Pre malignant dis. Of cervix L,2	Types ,grades ,screening, treatment
23	malignant dis. Of cervix L,2	Risk factors ,presentation, management
24	Benign dis.of overy L1,2	Classification&management
25	Malignant dis.of overy L1,2	grades ,screening,staging, treatment
26	Benign dis.of vulva L1,2	Types, presentation, management

27	Malignant dis.of vulva HRT L1	grades , ,staging, treatment presentatio The aim of sex hormone therapy. (types ,indications, routes, side effects).
28	HRT L2 Hirsutism and virilizatio	The aim of sex hormone therapy. (types ,indications, routes, side effects). to assess the etiology of the condition and correlate its severity with underlying causes and varies hormonal level
29	5.Urogynaecology L1,2	Objective: common presentation to gynecology so we have to know how to reach to underlying pathology and differentiate different types of incontinence &management
30	Endoscopy in gynecology	to learn the safe practice of endoscopic surgery

Course description template for Medical terminology

1- Course Name
Medical Terminology
2. Course Code:
Term107
3. Semester / Year:
2025-2026
4. Description Preparation Date:
2026
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
Total number of hours : 30 hrs **Number of Units : 4**
7. Course administrator's name
Name: lec Shaimaa hameed **Email: shaima.hamid@uos.edu.iq**
8- Course Objectives
Acquaintance with medical terms, which facilitates their use in the primary andhigher school years
9- Teaching and Learning Strategies
1..Theoretical lectures Using (Data Show) to display medical images **2.**Seminars (students are assigned a topic within the curriculum for presentationand discussion) **3.**In-person and electronic blended learning via the e-learning platform (Classroom).

10 -The structure of the course for theoretical medical terminology first academic level					
week	hour	**Required educational Goals**	Unit name and/or topic	education method	**Evaluation Method**
1	1	Orientation of medical terminology	Medical Terminology	Lecture	Exam

2	1	Objectives of medical terminology	Medical Terminology	Lecture	Exam
3	1	Term of position and colors	Medical Terminology	Lecture	Exam
4	1	Term of numbers	Medical Terminology	Lecture	Exam
5	1	Term of negatives	Medical Terminology	Lecture	Exam
6	1	Term of skin disorder	Medical Terminology	Lecture	Exam
7	1	Term of musculoskeletal disorder	Medical Terminology	Lecture	Exam
8	1	Term of cardiovascular disorder (part 1)	Medical Terminology	Lecture	Exam
9	1	Term of cardiovascular disorder (part 2)	Medical Terminology	Lecture	Exam
10	1	Term of blood andblood formation organs	Medical Terminology	Lecture	Exam
11	1	Term of blood andblood formation organs	Medical Terminology	Lecture	Exam
12	1	Term of respiratory disorder	Medical Terminology	Lecture	Exam
13	1	Condition general	Medical Terminology	Exam	Lecture
14	1	Seminar	Medical Terminology	Exam	Lecture
15	1	Exam	Medical Terminology	Exam	Lecture

11- The structure of the course for theoretical medical terminology / firstacademic level

Week	**hours**	**Required educational goals**	**Unit name and/or topic**	**educatin method**	**evaluatin method**
1	1	Digestive disorders	Medical Terminology	Lecture	Exam
2	1	Urogenetal disorder	Medical Terminology	Lecture	Exam
3	1	Gynecological disorders	Medical Terminology	Lecture	Exam

4	1	Obstetrical disorders	Medical Terminology	Lecture	Exam
5	1	Fetal neonatal disorder	Medical Terminology	Lecture	Exam
6	1	Endocrine disorder	Medical Terminology	Lecture	Exam
7	1	Endocrine disorder	Medical Terminology	Lecture	Exam
8	1	Disorders of sense	Medical Terminology	Lecture	Exam
9	1	Disorders of vision	Medical Terminology	Lecture	Exam
10	1	Disorder of hearing	Medical Terminology	Lecture	Exam
11	1	Diagnostic disorders	Medical Terminology	Lecture	Exam
12	1	Symptomatic disorder	Medical Terminology	Lecture	Exam
13	1	Symptomatic disorder	Medical Terminology	Lecture	Exam
14	1	Seminar	Medical Terminology	Exam	Lecture
15	1	Exam	Medical Terminology	Exam	Lecture

12.Cours Evaluation	
1- Mid-course and final exams. 2- Pop quizzes.	
13. Learning and Teaching Resources	
1-Required course books	**Medical Terminology**
2- main references (sources)	Medical Terminology: Latin andGreek Origin with Arabic and **English Explanations**
3- Recommended books and references (scientific journals, reports)	Prefixes denoting numbers Medical Terminology Noun **Suffixes**
4- Electronic references, websites	https://globalrph.com/medterm/r/ https://aimseducation.edu/blog/all-**essential-medical-terms**

Academic Description Form For The Microbilogy Branch

This course description provides a brief summary of the most important characteristics of the course and the learning objectives expected of the student to achieve, proving whether he has made the most of the available learning opportunities. It must be linked to the description

of the program.

Concepts and terminology:

1- Program Vision
After graduation, the student should learn about microbiology diseases and their effects on the human body and distinguish between the normal and abnormal state of microorganisms through his general study and identification microscopy and laboratory.
2- Program Mission
Our college seeks to obtain international accreditation, and rise to the global level in terms of quality of outputs, And graduating highly qualified doctors in microbiology and community service.
3- Program Objectives
• Identify this vital science and its increasing importance to the doctor in particular and society in general. • Providing the student with medical information for all microorganisms necessary for their practice of the general medical profession • How to write medical and analytical reports for diseases resulting from viral, bacterial, fungal and parasitic infections. • Identify microorganisms of all kinds and study them clinically and microscopically. •

4- Program Accreditation
Theoretical and practical study and discussions of in-person and electronic blended learning (via the Classroom platform)
5- Other External Influences
Teaching Hospital, Library, Internet, Community, Medical Syndicate.

6- Expected learning outcome of the program
Knowledge
1. The student should be acquainted with microbiology diseases and their effects on every part of the body. 2. To distinguish between the normal and abnormal state of microorganisms through his general study and identification microscopy and laboratory. 3. How to write medical reports. 4- Encouraging students to engage in this specialization in the future" 5.. Being able to apply the results of the theoretical study practically By dealing with medical cases. 6.. Being able to conduct scientific studies and research to solve Individual and societal problems. Ability to use modern equipment to study the functions of body organs and diagnose pathological conditions.
Skills
1 - Avoid making mistakes when writing medical reports. 2 – Know how and safely to send cases 3 - Knowledge of scientific methods to read reports when receiving medical cases from medical institutions. 4- The correct ways to diagnose general diseases of humans.
Values
Acquire the ability to deal with pathological conditions, microscopic injuries, methods of analysis and conclusion and diagnose and meet the needs of patients. Acquire the ability to deal optimally with microorganisms .
7-- Teaching and Learning Strategies

1. Theoretical lectures practical application
2. Weekly seminars and seminars
3. Small group discussions to propose solutions to the problems of the individual and society.
4. Face-to-face and electronic blended learning for student activities through the e-learning platform (Class Room).

10- Evaluations Methods

1. Daily exams (theoretical and practical)
2. Mid-course exams and end of course exams
3. Weekly seminars and seminars

11- Faculty Members

Academic Rank	Specialization		Special requirements/skills		Number of Teaching Stuff	
	General	Special			Stuff	Lecture
Professor .muhamed musa ata	Immunology	Med. Immu.			√	
Professor asshraf fadle	Biology	Med. Micro.			√	
Assist prof falah abd	Biology	Med. Micro.			√	
Assist prof zena salem	General medicine and surgery	Pediatric			√	
Lec dr sadiq jafer wasel	General medicine and surgery	Ophthalmogy			√	
Lec dr mahmod qasim	General medicine and surgery	Pediatric				√
Lec dr.moamer jalel	Scince				√	

12- Professional Development

Orientation of new faculty members

Preparing seminars and introductory courses for new teachers with periodic meetings to introduce them to work contexts, daily guidance, continuous follow-up, and giving advice and guidance.

13- Professional development of faculty members

Continuous learning by searching for updates using the library and the Internet in addition to attending seminars
Discussions and specialized scientific seminars, as well as active attendance in teaching hospitals to hone skills.

14- Acceptance Criterion

Admission is centralized through the Ministry of Higher Education and Scientific Research based on the student's grades in the sixth scientific after preparing the form for that electronically.

15- The most important sources of information about the program

The website of the university and the college in addition to the website of the Ministry of Higher Education and Scientific Research as well as College Library and Central Library at the University.

16- Program Development plan

- Developing the scientific and administrative staff in the college through annual evaluation files, which reveal weaknesses and strength.
- Carrying out evaluation studies related to the development and improvement of the performance of senior leaders, faculty members and employees working in the college.
- Proposing strategies, plans and executive policies to ensure quality and reliability.
- Develop guidelines for the methods of applying quality and academic accreditation in order to reach the best.
- Develop detailed data and statistics about the college, its objectives, departments, activities and future plans to be accomplished.
- Provide advice and guidance on what the institution should do in order to improve for the better in full compliance with Accreditation standards.

Program Skills Outline

				Required program Learning outcomes											
Year/Level	Coarse Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Third (2025-2026)	Mic301	Microbiology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
First (2025-2026)	Bio103	Biology		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third (2025-2026)	Paras 307	Parasitology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fifth (2025-2026	Oph 503	Ophthalmology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third (2025-2026)	Sur 306	Surgery3	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fourth (2025-2026)	Syrg402	Surgery 4	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fifth (2025-2026)	Sur501	Surgery 5	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sixth (2025-2026)	Surg603	Surgery 6	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fourth (2025-2026	Ped408	Pediatric 4	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fifth (2025-2026	Ped508	Pediatric 5	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Sixth (2025-2026)	Ped602	Pediatric 6	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
First (2025-2026)	Democ106	حقوق الانسان والديمقراطية	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second (2025-2026)	Crimebath 208	جرائم حزب البعث	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Course Description Form

1. Course Name

Microbiology

2. Course Code

Mic301

3. Semester / Year

2025 – 2026

4. Description Preparation Date

2026

5. Available Attendance forms

Attendance is mandatory

6. Number of Credit hours (total) /Number of Unit (total)

Microbiology 90 theoretical hours , 60 practical hours

7. Course administration name (mention all, if more than one Name)

- Prof. Dr. Mohamed musa ata
- Prof. Dr. ashrf fadel gumaa
- Assist. Prof. Dr. flah abd al-Hassan

8. Course Objective

- Providing students with special skills to know the health problems suffered by the patient, their causes from microorganisms and to know the most appropriate ways and means to solve these problems.
- Providing students with the basic skills to perform various laboratory analyzes.
- The use of modern means in research and analysis of the presence and development of

microorganisms with the work of modern experiments for the most important methods that aim to reduce the impact of pathogens of microorganisms the spread of infectious diseases, including the use of vaccines and the application of personal hygiene and protective measures.

9. Teaching and Learning Strategies

Giving theoretical lectures.
Special practical laboratories.
Practical application in specialized microbiology laboratories.
Field visits to various relevant institutions.
Face-to-face and electronic blended learning for student activities through the e-learning platform (Class Room).
Weekly seminars and seminars.
Small group discussions and proposing solutions to the problems of individuals and society.

10- Course Structure

Structure of the microbiology course / third academic level

Part1: immunology		
The week	**The title**	**Lecture objective**
1	The Nature of Host Defenses	To understanding of The series of defenses that protect us against invasion by harmful microbes and other foreign matter. Defenses development and specificity. • •Three lines of defenses: 1st line chemical, physical and genetic barriers. second line defenses such as phagocytosis, inflammation, complement system, and interferon and third line defenses: acquired immunity
2	Systems Involved in immune	To understanding of The systems that are most involved in immune function (the blood, lymphoid organs and tissues, and theRES). • White blood cells, types and formation in the red bone marrow. • Some of their complex functions relating to phagocytosis,inflammation, antibody production, and pathogen killing. • The lymphoid organs (spleen, lymph nodes, thymus, GALT, MALT) their importanceinsurveillance and immune reactions.
3	Nonspecific Immune Reactions	To understanding of Inflammation as protective response to injury. • •Types of chemical mediators, that releasedby cells during inflammation and other immune responses. Interferon is a nonspecific immune mediator that inhibits the replicationof viruses and regulates a variety of immune responses. • The complement system sequentially reaction to lyse cells and viruses.

4	Phagocytes	To understanding of Phagocytes as specialized cells that function in engulfment andclearance of foreign molecules, cells, viruses, and particles. Their numerous enzymes and toxic chemicals to carry out phagocytosisfunction.
5	The Acquisition of Specific immunity	To understanding of Acquired specific immunities provided by B and T lymphocytes that protect us against infection and their role to survival.
6	The origin of diversity and specificity	To understanding of •Genetically programmed cells to react with foreignsubstances (antigens). •Glycoprotein receptors that dictate their specificityand reactivity. B lymphocytes receptors, T lymphocytes receptors, and macrophages receptors such as MHC and HLA. Differentiation of lymphocytes that create of genetically differentclones that each have a unique specificity for antigen. The B cells and T cell maturity and migration to lymphoid tissues. Antigens of foreign cells, viruses, and molecules that capable of triggering immune reactionsby lymphocytes. The B and T cells react with antigens through a complex series of mechanisms

7	The Classes of Immunoglobulin s	To understanding of B cells activated by antigen giving riseto plasma cells that secrete antibodies • (humoral immunity) and longlivedmemory cells. Antibodies binding sites and their roles in agglutination, opsonization, • complement fixation, andneutralization. The amount of antibodies during immediate and memory reactions.
8	Immunization and vaccination	To understanding of The categories of natural, artificial, active,and passive immunities. • Powerful medical tools to artificially induce protective immunities. • Immunization by means of passive and active methods. • Vaccines types: dead or live cells and viruses, parts of cells or viruses, or by recombinant DNA techniques.
9	Serological and immune tests	To understanding of Reactions between antibodies and antigens that • can be used in diagnosis of disease and identification of pathogens. Serology testing of a patient's blood serum that can indicate a current or past • infection and the degree of immunity. Tests that produce visible interactions of antibodies and antigens include • agglutination, precipitation, and complement fixation.

10	Serological and immune tests	To understanding of • Assays can be used to separate antigens and antibodies and visualize them with radioactivity or fluorescence (such as immunelectrophoresis, Western blot, and direct and indirect immunoassays.
11	Disorders in Immunity	To understanding of • The several types of dysfunctions (immunopathologies). •The dysfunctions that are due to abnormally heightened responses to antigens (allergies, hypersensitivities, and autoimmunities). •the dysfunctions that are due to the reduction or loss in protective immune reactions due to genetic or environmental causes such as (immunodeficiencies and cancer).
12	Disorders in Immunity	To understanding of • Some immune damage that caused by normal actions that directed at foreign tissues placed in the body for therapy, such as transfusions and transplants. • Hypersensitivities divisions into immediate, antibody-mediated, immune complex, and delayed allergies. Allergens that cause a hypersensitive or allergic response.

13	Disorders in Immunity	To understanding of • The immediate type of allergy that mediated by special types of B cells that produce IgE. IgEinducing mast cells to release allergic chemicals such as histamine.
14	Disorders in Immunity	To understanding of Examples of immediate allergies are atopy, asthma, food allergies, and anaphylaxis. • Another type of hypersensitivity arises from the action of other antibodies (IgG and IgM) that can fix complement and lyse foreign cells. Immune complex reactions that caused by circulating antibodies against foreign molecules and their accumulating in tissues and organs.
15	Disorders in Immunity	To understanding of • Autoimmune diseases. The production of B and T cells that sensitized to react with the body's natural molecules. Some examples of these diseases (rheumatoid arthritis, systemic lupus erythematosus, myasthenia gravis, and multiple sclerosis). T cells in delayed-type hypersensitivities.

Part 2: bacteriology		
The week	**The title**	**Lecture objective**
16	Immunodeficien cy diseases	To understanding of •Immunodeficiencies pathologies in which B and T cells and other immune cells are missing or destroyed. The primary outcome of immunodeficienciesas in recurrent infections and lack of immune competence.
17	Cancer	To understanding of Cancer as an abnormal overgrowth of cells due to a genetic defect and the lack of effective immune surveillance.

Practical sessions

1. Introduction to Immunology laboratory
2. Antibody-Antigen (Ab-Ag) reaction (hemagglutination)
3. (Ab-Ag) reaction (precipitation)
4. Electrophoretic Techniques (Immunoelectrophoresis)
5. Ab-Ag reaction (complement fixation)
6. Ab-Ag reaction (ELISA) and Immunoblot.
7. Ab-Ag reaction (Immunoflourescence test and Radio immune assay) Cell isolation, Cell counting and functional assessment.

1	Introduction of medical microbiology and bacterial structures	To understanding of Science of medical microbiology. -١ Structures of bacterial cell envelope. -٢ Nuclear materials, plasmid and transposons -٣ Study the external appendages and endospores -٤
2	Bacterial genetics and gene transfer	To understanding of Science of genetics -١ DNA and RNA types -٢ Mutations -٣ Methods of gene transfer -٤
3	Host-pathogen relations	To understanding of Infectious process -١ Attachment of microbial agent with host cell. -٢ Invasion process -٣ Antiphagostic factors -٤ Intracellular pathogenicity -٥
4	Sterilization and disinfection	To understanding of Methods of sterilization and disinfection -١ Physical process -٢ Chemical process -٣
5	Antimicrobial therapy	To understanding of Types of antibiotics -١ Mode of its action -٢ Methods of resistance -٣ Origin of drug resistance -٤ Side effects of antibiotic
6	Staphylococci species	To understanding of The Staphylococci characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.

7	Streptococci species	To understanding of The Streptococci characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
8	Neisseria species	To understanding of The *Neisseria*characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
9	*Campylobacter*s pecies	To understanding of The *Campylobacter*characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
10	*Helicobacter pylori*	To understanding of The *H. pylori*characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
11	*Legionella* species	To understanding of The *Legionella* characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests •

		Treatment. • Epidemiology, Prevention, & Control.
12	*Listeria* species	To understanding of The *Listeria* characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
13	The Vibrios	To understanding of The Vibrios characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
14	*Corynebacteriu m*	To understanding of The *Corynebacterium*characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
15	Rickettsia and Related Genera	To understanding of The Rickettsiacharacteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.

16	*Brucellae*	To understanding of The *Brucellae* characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
17& 18	Enteric Gram Negative Rods (E. coli, klebsiella, proteus, pseudomonas, provencia group) Salmonella, Shigella	To understanding of The Enteric Gram Negative Rods characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. Epidemiology, Prevention, & Control. •
19	*Acinetobacter* species	To understanding of The *Acinetobacter*characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
20&21	Complex aerobic Actinomycetes	To understanding of The Actinomycetes characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.

22	Mycobacteria	To understanding of The Mycobacteria characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
23	*Bacillus* genus	To understanding of The *Bacillus*characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control
24	*Clostridium* genus	To understanding of The *Clostridium* characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
25	Borella, Leptospira	To understanding of The Borella, Leptospira characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.

26	Spirochaetes : T . pallidum,	To understanding of The Spirochaetes : T . pallidum, Borella, Leptospira • characteristics. Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
27&28	Pasterurella : Hemophilic , Bordetella	To understanding of The Pasterurella : Hemophilic , Bordetella characteristics. • Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.
29&30	Chlamydi a , normal microbial flora of human body	To understanding of The Chlamydia , normal microbial flora of human body • characteristics. Morphology and Identification. • Antigenic Structure. • Pathogenesis. • Pathology. • Clinical Findings. • Diagnostic Laboratory Tests • Treatment. • Epidemiology, Prevention, & Control.

Practical sessions

1-Tools and biosafety 2-Sterilization
3-Antibiotic susceptibility test
4-Methods of bacterial counting and measuring bacterial growth 5-Bacterial staining
6- Culturing media
7- Growth characteristics
8- General urine examination
9- Biochemical tests
10-Staphylococci
11-Streptococci
12-*Neisseriae*
13-Aerobic spore-forming bacilli
14-Anaerobic spore-forming bacilli
15-Enterobacteriaceae

16-Non-Lactose Fermentors
17-*Pseudomonas aeruginosa*
18-Vibrio
19-*Listeria*
20-*Legeonella*
21-*Helicobacter*

Part3: Virology		
The week	**The title**	**Lecture objective**
1	Virology introduction-properties and classification	To understanding of the follwings General properties of viruses.-١ Define structure of viruses.-٢ 3-classification of RNA and DNA viruses. 4- Evolutionary Origin of Viruses and Universal System of Virus Taxonomy.
2	Chemical composition of viruses	To understanding of the define compartment of virus which includes Viral protein, viral nucleic acid, viral lipid envelopes, viral glycoproteins, cultivation and assay of viruses, detection of virus- infected cells, Quantitation of viruses,physical and biologic methods.
3	Reaction of viruses to physical and chemical agents	To understanding of different physical and chemical factors affected viruses such as 1-Heat & Cold, 2- Stabilization of Viruses by Salts 3-pH, 4-Radiation, 5-Photodynamic inactivation, 6- Ether Susceptibility, 7-Detergents, Formaldehyde, Antibiotics & Other Antibacterial Agents,
4	Replication of Viruses: Virus Growth Cycle	To understanding of An Overview of Replication of RNA and DNA viruses, • General Steps in Viral Replication Cycles,
5	Expression of Viral Genomes and Synthesis of Viral Components	To understanding of Morphogenesis and Release, 2- Genetics of Animal Viruses, Viral Vectors,
6	Pathogenesis of Viral Diseases	To understanding of Pathogenesis of Viral Diseases: -١ Steps in Viral Pathogenesis, 3- Viral Persistence: Chronic & Latent Virus Infections

7	Viral infections (1)	To understanding of Overview of Acute Viral Respiratory Infections, -١ Overview of Viral Infections of the GIT,
8	Viral infections (2)	To understanding of Overview of Viral Skin Infections, 2- Overview of Viral Infections of the CNS, 3- Overview of Congenital Viral Infections, 4- Effect of Host Age
9	rubella and other congenital viral infections	To understanding of Transmission & Epidemiology, 2- Pathogenesis & Immunity, 3- Clinical -١ Findings, 4- congenital rubella syndrome (CRS), Lab Diagnosis, Treatment, Prevention, Diagnosis of Congenital viral infections
10	RNA non- enveloped Picornaviruses enteroviruse	To understanding of 2- enteroviruses, 1- Properties of Picornaviruses, Picornavirus Replicati Poliovirus, 3- Pathogenesis**,** Pathology, Clinical Findings, Laboratory Diagnosis,
11	Coxsackieviruses rhinoviruses	To understanding of 1- Coxsackieviruses and their Clinical Findings, Transmission & Epidemiology, RHINOVIRUSES and their Transmission & Epidemiology -٢ Group B Specific Diseases: echoviruses
12	Rotaviruses and some examples of different viruses	To understanding of Pathogenesis, clinical findings, lab diagnosis, epidemiology, treatment and -١ control, Caliciviruses, 3- Astroviruses, 4- Viruses cause GIT infections, 5- Overview on Viruses that cause Common cold, 6- Overview on Viruses that cause lower respiratory tract infections, 7- Overview on Viruses that cause Genital tract and sexually transmitted Infections.
13	Rabies virus and other CNS Viral infections	To understanding of Rabies virus and Properties of the Rabies Virus, -١ Rabies Virus Replication, 3- Rabies 4- Pathogenesis & Pathology, Clinical Findings, Laboratory Diagnosis, Prevention, Treatment & Control, Other Viral CNS infections,
14	Hepatitis A-E Viruses: An Overview (1)	To understanding of Types of Hepatitis and General Characteristics of Hepatitis Viruses, 2- Hepatitis - A Virus, 3-Transmission & Epidemiology, Pathogenesis & Immunity, 4- Clinical finding Treatment & Prevention, Lab Diagnosis,
15	Hepatitis A-E Viruses: An Overview (2)	To understanding of 1- Hepatitis B Virus, 2- Transmission & Epidemiology, Replication, Pathogenesis & Immunity, clinical findings, lab diagnosis, treatment, prevention, 3-hepatitis C virus (HCV), Hepatitis C Life Cycle, Transmission & Epidemiolo Pathogenesis & Immunity, Clinical Findings, lab diagnosis, treatment, prevention

22-

16	Hepatitis A-E Viruses: An Overview (3)	To understanding of 1-Hepatitis D Virus, 2- Transmission and Epidemiology, Hepatitis D – 3- Clinical Features, lab diagnosis, treatment and prevention, Hepatitis E Virus,
17	Herpesvirus	To understanding of 1-Introduction, important properties of herpesviruses, Structure & Composition, 2- Classification, Herpesvirus Replication, 3-Overview of Herpesvirus Diseases, Properties of the Viruses, Pathogenesis & Pathology, Primary Infection, Latent ٤- Infection, Clinical Findings, Oropharyngeal Disease, ٥- Keratoconjunctivitis, 7-Neonatal Herpes, Infections in Immunocompromised Hosts, lab diagnosis,
18	Chemotherapy of viruses, antiviral agents, vaccines	To understand all mechanisms followed by different Types of antiviral chemotherapies, 2- To know about the different kinds of vaccines used for prevention of viral infections
19	Measles and mumps viruses	Introduction, important properties of measles and mumps viruses, pathogenesis, clinical findings, lab diagnosis, treatment, prevention, types of vaccines.

Corynebacterium and *Mycobacterium*

Part4: mycology (4 hours)

- Interoduction, Actinomyces and Nocardia
- Dermatophytes, Candida
- Cryllococcus
- Histoplasma and Sporotrichosis
- Miscellaneous fungi: Aspergiliosis , Penicillium, Rhizopus

Antifungal agents, Antibiotic produced by fungi

Part3: practical session Virology		
The week	**The title**	**Lecture objective**
1	**Introduction**	To understanding of the followings What is the virus, Methods of Diagnosing Viral Infections, Surface protein of the virus,
2	**Virus Isolation Using three living systems**	To understanding of the Isolation of the virus using three living systems, Lab Animals, Chick embryo, tissue culture
3	**Types of tissue cultures**	Semi- To understanding of Primary tissue culture, advantages, disadvantage continuous cell cultures, advantages, disadvantages, Continuous (Cell line), advantages, disadvantages, examples of isolated viruses (SARS- infected Vero cells)
4	**Demonstration on Tissue Culture used for virus isolation**	To understanding of **Preparation of primary tissue culture, procedure, Counting of cells**
5	**Inoculation of clinical sample in living system**	**A-**Inoculation of clinical sample in tissue culture, how to harvest Rabbit kidney for tissue culture, procedure, Inoculation of clinical sample in tissue culture, Recognition of virus growth,

Course Description Form

1. Course Name

Parasitology

2. Course Code

Mic301

3. Semester / Year

2025 – 2026

4. Description Preparation Date

2026

5. Available Attendance forms

Attendance is mandatory

6. Number of Credit hours (total) /Number of Unit (total)

600 theoretical hours ,9 practical hours

7. Course administration name (mention all, if more than one Name)

- Prof. Dr. Mohamed musa ata
- Assist. Prof. Dr. flah abd al-Hassan

8. Course Objective

- Providing students with special skills to know the health problems suffered by the patient, their causes from microorganisms and to know the most appropriate ways and means to solve these problems.
- Providing students with the basic skills to perform various laboratory analyzes.
- The use of modern means in research and analysis of the presence and development of

microorganisms with the work of modern experiments for the most important methods that aim to reduce the impact of pathogens of microorganisms the spread of infectious diseases, including the use of vaccines and the application of personal hygiene and protective measures.

9. Teaching and Learning Strategies

Giving theoretical lectures.
Special practical laboratories.
Practical application in specialized microbiology laboratories.
Field visits to various relevant institutions.
Face-to-face and electronic blended learning for student activities through the e-learning platform (Class Room).
Weekly seminars and seminars.
Small group discussions and proposing solutions to the problems of individuals and society.

10- Course Structure

Structure of the parasitology course / third academic level

	Topics	**Objective**	Practical
1	Introduction of parasitology	To understanding of Define parasite , parasitology , type of parasite , host and type host, parasite transmission , type of parasite sample detection	Type of sample and General stool examination
2	Protozoalogy : Class : sarcodina , Entamoeba histolytica (amoebic dysentery)	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
3	Class : sarcodina, other amoebae	To understanding of Explain the morphology , life cycle , route of transmission ,	Slide show the parasite different stages with description for each one.

		pathology, diagnosis, prevention and control of parasite.	
4	Class; flagellata : Giardia lamblia and trichomonas species	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
5	Class; flagellate, leishmania sp	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
6	Class; flagellate, Trypanosoma sp	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each
7	Class; ciliata; Balantidium coli With examination for previous lectures	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one
8	Classs; sporozoa ; intestinal coccidian	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.

9	Classs; sporozoa; toxoplasma sp	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite. .	Slide show the parasite different stages with description for each one
10	Classs; sporozoa; plasmodium sp(malaria)	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
11	Helminthology : class: trematoda ; Schistosoma sp.	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite	Slide show the parasite different stages with description for each one
12	Helminthology : class: trematoda ; Fasciola sp (liver root)	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
13	Helminthology : class: trematoda ; Fasciolopsis and clonorchis sp	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
14	Helminthology : class: trematoda ; Heterophyes heterophyes , metagonimus sp	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of	Slide show the parasite different stages with description for each one.

		parasite.	
15	Helminthology : class: trematoda ; Lung fluke ; paragonimus sp.	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
16	Helminthology : class, cestoda, echinococcus sp (hydatid cyst)	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
17	Helminthology : class, cestoda ; taenia sp.	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
18	Helminthology : class; cestoda , H.nana and dipylidium sp , D. latum	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
19	Helminthology : class, nematode , Intestinal species, Ascaris lumricoides.	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
20	Helminthology : class, nematode , Intestinal species; Enterubius and Trichuris	To understanding of Explain the morphology , life cycle , route of transmission , pathology, diagnosis,	Slide show the parasite different stages with description for each one.

	sp.	prevention and control of parasite.	
21	Helminthology : class, nematode , Intestinal species, hook worm	Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
22	Helminthology : class, nematode , Tissue species; wuchereria sp and onchocerca volvolus .	Explain the morphology , life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one.
23	Entomology , insect or ectoparasite, scabei and lice	Explain the morphology ,life cycle , route of transmission , pathology, diagnosis, prevention and control of parasite.	Slide show the parasite different stages with description for each one

Course Description Form for Medical Biology

1. **Course Name:**
Medical Biology / FIRST LEVEL
2. **Course Code:**
BIO103
3. **Semester / Year:**
2025/2026
4. **Description Preparation Date:**
2026
5**. Available Attendance Forms:**
Mandatory attendance
6. **Number of Credit Hours (Total) / Number of Units (Total)**
- 90 theoretical hours - 60 practical hours -
7. Course administrator's name (mention all, if more than one name)
Name: Prof. Dr.ashraf fade Assist lec ali maged
8. Course Objectives

1. Providing students with specialized scientific skills and concepts related to the study of medical biology and its importance in diagnosis and treatment.
2. Understanding and studying the precise structure of human cells, their various components, shapes, and functions, the methods of transporting ions across the plasma membrane, the chemical composition of cells, and studying the various cellular organelles, their structures, and functions.
3. Linking scientific concepts to diseases caused by dysfunction of cellular organelles found inside living cells and studying them extensively to highlight the role of organelles in the life and vitality of cells.
4. Studying the methods of division of living cells to enrich the student with concepts in cell division, studying the nature of chromosomes and how to control the regularity of those divisions, studying control points and how errors occur in division that lead to the formation of tumors.
5. Understanding and studying the structure of DNADNA and RNA, and the study of genetic genes, the mutations occurring in them, the resulting genetic diseases, and the mechanisms of self-correction of errors.
6. Study modern methods of diagnosis and follow-up of diseases to provide the

student with important information such as PCR, ELISA, gel electrophoresis.

9. Teaching and Learning Strategies

Strategy	• Theoretical lectures. • Teaching small groups by making seminars related to the topics. • Show educational videos and pictures related to the parts of the cell and how they divide

10. Course Structure

The structure of the course for theoretical and practice Medical Biology /First academic level / the first course

Week	Hours	Required learning outcome	Unit or subject name	Learning method	Evaluation method
1	**2 hrs. theory** **2hrs. practical**	Introduction & Definitions	Cells make up living things	Lecture+ lab	General question discussion + exam
2	**2 hrs. theory** **2hrs. practical**	Data Collection	Cells make up living things	Lecture+ lab	General question discussion + exam
3	**2 hrs. theory** **2hrs. practical**	Sampling Methods	Cells make up living things	Lecture+ lab	General question discussion + exam
4	**2 hrs. theory** **2hrs. practical**	Data Presentation	Cells make up living things	Lecture+ lab	General question discussion + exam

5	**2 hrs. theory** **2hrs. practical**	Measurements of Central Tendency	Membrane models Have Changed	Lecture+ lab	General question discussion + exam
6	**2 hrs. theory** **2hrs. practical**	Measurements of Variability	Membrane models Have Changed	Lecture+ lab	General question discussion + exam
7	**2 hrs. theory** **2hrs. practical**	Range & Variance	Membrane models Have Changed	Lecture+ lab	General question discussion + exam
8	**2 hrs. theory** **2hrs. practical**	Standard Deviation & Coefficient of variation	Membrane models Have Changed	Lecture+ lab	General question discussion + exam
9	**2 hrs. theory** **2hrs. practical**	Probability (Part 1)	Energy	Lecture+ lab	General question discussion + exam
10	**2 hrs. theory** **2hrs. practical**	Probability (Part 2)	Energy	Lecture+ lab	General question discussion + exam
11	**2 hrs. theory** **2hrs. practical**	Student's t-Test	Energy	Lecture+ lab	General question discussion + exam

12	**2 hrs. theory** **2hrs. practical**	Chi-square Test (Part 1)	Energy	Lecture+ lab	General question discussion + exam
13	**2 hrs. theory** **2hrs. practical**	Chi-square Test (Part 2)	How Cells Acquired ATP	Lecture+ lab	General question discussion + exam
14	**2 hrs. theory** **2hrs. practical**	Correlation & Regression (Part 1)	How Cells Acquired ATP	Lecture+ lab	General question discussion + exam
15	**2 hrs. theory** **2hrs. practical**	Correlation & Regression (Part 2)	How Cells Acquired ATP	Lecture+ lab	General question discussion + exam

The structure of the course for theoretical and practice Medical Biology / FIRST academic level / the second course

Week	Hours	Required learning outcome	Unit or subject name	Learning method	Evaluation method
1	**2 hrs. theory** **2hrs. practical**	Introduction & Definitions	Cells Divisions	Lecture+ lab	General question discussion + exam
2	**2 hrs. theory** **2hrs. practical**	Data Collection	Cells Divisions	Lecture+ lab	General question discussion + exam
3	**2 hrs. theory** **2hrs. practical**	Sampling Methods	Cells have a chromosome 281	Lecture+ lab	General question discussion + exam

4	**2 hrs. theory** **2hrs. practical**	Data Presentation	Cells have a chromosome	Lecture+ lab	General question discussion + exam
5	**2 hrs. theory** **2hrs. practical**	Measurements of Central Tendency	Cells have a chromosome	Lecture+ lab	General question discussion + exam
6	**2 hrs. theory** **2hrs. practical**	Measurements of Variability	Introducing Gregor Mendel	Lecture+ lab	General question discussion + exam
7	**2 hrs. theory** **2hrs. practical**	Range & Variance	Introducing Gregor Mendel	Lecture+ lab	General question discussion + exam
8	**2 hrs. theory** **2hrs. practical**	Standard Deviation &	Introducing Gregor mendl	Lecture+ lab	General question discussion + exam
9	**2 hrs. theory** **2hrs. practical**	Probability (Part 1)	Chromosomes and genes	Lecture+ lab	General question discussion + exam
10	**2 hrs. theory** **2hrs. practical**	Probability (Part 2)	Chromosomes and genes	Lecture+ lab	General question discussion + exam
11	**2 hrs. theory** **2hrs. practical**	Student's t-Test	Considering the Chromosomes	Lecture+ lab	General question discussion + exam
12	**2 hrs. theory** **2hrs. practical**	Chi-square Test (Part 1)	Considering the Chromosomes	Lecture+ lab	General question discussion + exam

13	**2 hrs. theory** **2hrs. practical**	Chi-square Test (Part 2)	Searching for the Genetic Material	Lecture+ lab	General question discussion + exam
14	**2 hrs. theory** **2hrs. practical**	Correlation & Regression (Part 1)	Searching for the Genetic Material	Lecture+ lab	General question discussion + exam
15	**2 hrs. theory** **2hrs. practical**	Correlation & Regression (Part 2)	What Genes Do	Lecture+ lab	General question discussion + exam

11.Cours Evaluation
-Daily exams. -evaluation perform an action practical experiment in the laboratory. -Reports preparation -Mid-course exam. -final course exam.
12. Learning and Teaching Resources
Required textbooks (curricular book , if any) Medical biology by Sylvia Madar
Main references (source) Human Anatomy and Cell physiology by Mc graw bill 17th ed
Recommended book and references (scientific journals , reports …….) Developmental Biology. Gilbert 2003-2006
Electronic References , Website **https://themdjourney.com/20-medical-for-books-biologystudents/#The_Anatomy_Coloring_Book**

Description Form for surgery

1. **Course Name:**
Surgery
2. **Course Code:**
SUR317 SURG404 SURG601
3. **Semester / Year:**
The third, fourth and fifth stages are courses The first course is 15 weeks and the second course is 15 weeks
4. **Description Preparation Date:**

8. Course Objectives	
1-Training students to obtain the scientific skills necessary to work in scientific institutions concerned with pediatrics. 2 - Training students to obtain practical skills in using the means, information, skills and laboratories necessary for the diagnosis and treatment of the child. 3 -Providing students with the practical field skills necessary to distinguish genetic phenomena such as the presence of beneficial genetic mutations and to benefit from them. 4 - Training students to obtain the skills required to work in the specialty of pediatrics.	
9. Teaching and Learning Strategies	
Strategy	-Lectures, computers, plasma screens, modern scientific equipment,clinical tours, educational seminars, audio-visual equipment, discussions, teaching hospitals. In-person and electronic blended education (via the Classroom platform).

2026
5. Available Attendance Forms:
Theoretical, practical and discussions

hours (1 unit) and 30 practical hours (1 unit) The second course: 15 hours of theory (1 unit) and 30 hours of practical (1 unit) Stage 5 Fractional/ Only one course: 30 theoretical hours (2 units) and 30 practical hours (1 unit) The fifth stage ENT / Only one course: 30 theoretical hours (2 units) and 30 practical hours (1 unit) Sixth stage: 300 practical hours (10 units) + 60 hours of seminars (2 units)
Sixth stage: 300 practical hours (10 units) + 60 hours of seminars (2 units

10- Course Structure

11-The structure of the course for surgery /third academic level /

S	Lecture	No.
1	Fluid , electrolyt & acid base balance	2
2	Metabolic response to trauma	2
3	Heamorrhage, blood transfusion	2
4	Shock	2
5	Wound healing. Scar and keloid	2
6	Surgical infections	1
7	Sterilization	1
8	Burn	2
9	Peripheral arterial diseases & gangrene	2
10	Lymphatic	1
11	DVT	1
12	Ulceration	1
13	Hydatid disease	2
14	Neoplasim & tumor marker	1
15	masses Soft tissues	2
16	Skin infection (cellulitis , abcesses , boils ….)	1
17	Types of incisions	1
18	Surgical material & instruments	1
19	Preoperative assessment	1
20	Postoperative complication	1
21	Laparoscope & endoscope	1

Surgery /fourth stage

11-The structure of the course for surgery /fourth academic level /

S	Lecture	No.
	Urology (24 hours)	
	II- General surgery (66 hours)	
	1-Hernias (3hrs)	
	2-Breast surgery (3hrs)	
	3-Thyroid surgery (4 hrs)	
	4-Biliary surgery (4hrs)	
	5-bowel surgery (8hrs)	
	6-Appendix (3 hrs)	
	7-Anorectal surgery (6 hrs)	
	8 -Diabetic foot (1 hr)	
	9–Trauma (blunt and penetrating)& ATLS (3 hrs)	
	10-Tongue mass & ulcer (1hr)	
	11-oesophageal surgery (4 hrs)	
	12-Gasteric surgery (4 hrs)	
	13-Pancreas (3 hrs)	
	14-Spleen (2 hrs)	
	15-liver surgery (3 hrs)	
	16-Peritonium (2 hrs)	
	17-Head & neck surgery (6 hrs)	
	18-hand infection (1 hr)	
	19-Cervical LAPs (2 hrs)	
	20-Salivery glands (3hrs)	

Surgery /fifth stage

11-The structure of the course for surgery /fifth academic level /

Lecture
Surgical subspecialities 40 **1.Thoracic surgery (5 hrs)** **2.Cardiovascular surgery (5hrs)** **3-Neurosurgery (6 hrs)** **4-Anasthesia (6 hrs)** **5.Maxillofacial surgery(3hrs)** **6-plastic surgery (5 hrs)** **7.Peadiatric surgery (5hrs)** **8- War surgery (5hrs)**

Description Form for Pediatrics

1. **Course Name:**
Pediatrics
2. Course Code:
PED401 , PED505/ PED603/
3. Semester / Year:
Fifth stage / 60hr stage / courses: 4 courses, each course lasts 12 weeks Fourth stage 90hr
4. **Description Preparation Date:**
2026
5. **Available Attendance Forms:**
Theoretical, practical and discussions
7. **Course administrator's name (mention all, if more than one name)**
1. Assist .prof zena salem 2. Dr.mahmod qasim
8. Course Objectives
. Study the theoretical basis of pediatrics in normal and pathological cases. • Teaching students how to examine children and the mechanism of diagnosis and treatment of these medical conditions, especially emergency cases. • In addition to developing their role in educating patients to prevent the spread of diseases and how to prevent them through primary health centers.
9. Teaching and Learning Strategies

Strategy	1. Theoretical lectures using illustrations. 2. Practical application of concepts studied in specialized laboratories and teaching hospitals. 3. Seminars (students are assigned a topic within the curriculum for presentation and discussion). 4. Solve scientific and medical problems by discussing their merits

Description Form for Pediatrics/fourth stage

No.	Lectures	Objectives
	Growth and Development	Evaluation of growth
	Assessment of growth in neonate & infancy	How student evaluate growth in this age group
	Assessment of growth in toddler & preschool children	How student evaluate growth in this age group
	Assessment of growth in school age children	How student evaluate growth in this age group
	Assessment of growth in adolescence	How student evaluate growth in this age group
	Nutritional assessment in children , types of malnutrition & investigation	How candidate assess nutritional status
	Marasmus & kwashiorkor	Clinical presentation & compares' and outcome for each
	Nutrition rickets	Vit D metabolism ,investigation & treatment
	Vaccination, introduction & type of immunity	Knowledge about vaccination and how its delivered to children
	Factor affecting vaccine efficacy	Cool chain of vaccine protection
	Contraindication & side effect of vaccination	Health promotion about vaccine adverse effect and precaution of vaccine administration
	Review of some vaccines lie measles, mumps, rubella, polio & rota virus vaccination	Evaluation of each vaccine efficacy , benefit and maximum protection
	Common infection disease (measles & rubella)	To know clinical features of both diseases and its complication
	Pertussis and varicella	Early diagnosis may prevent serious complication
	Mumps, roseola infantum and diphtheria	Presentation and management
	Poliomyelitis and tetanus	To know features of both disease and early DX, prevent serious complication
	Viral hepatitis	To know methods of transmission of hepatitis A,C,B and treatment policies
	HIV in children	General information about HIV virus , transmission ,DX, and treatment

	Gastroenteritis (infection of gut)	General information about gut development and function
	Acute gastroenteritis	Presentation , etiology and management
	Dehydration (types ,pathophysiology ,WHO classification)	To know how you manage case of different types of dehydration
	Chronic diarrhea	To know definition , osmotic and secretory types and how differentiate between these types and how manage
	Fluid therapy (types)	To know a different types of fluid and methods of rehydration and how calculate fluid for different types of dehydration
	Failure to thrive , definition ,types growth chart	How the student can identify a case of FTT and how he can use the growth chart
	Organic and inorganic types of FTT	How identify , manage and follow up such cases
	Feeding in children ,breast feeding	To know how establish breast feeding in the first few hours of life
	Breast feeding (content ,advantage and technique of feeding	To explain the advantage and encourage for breast feeding
	Artificial feeding (types of artificial milk, content ,types of available formulas in the market	To know different types of artificial milk and risk of such formula on the baby if not needed
	Comparism between breast and bottle feeding, disadvantage of bottle feeding and complication	To know the major differences between breast and artificial milk and why we encourage breast feeding
	Review of lectures given Q&A	Evaluation of the course and prepare the candidate for the final written exam

Description Form for Pediatrics/fifth stage

Week no.	Lecture title	Objective
1	Introduction to neonate	How you deal with neonate
	Birth asphyxia &meconium aspiration	Types of asphyxia. management risk of meconium aspiration and outcome
2	RDS & apnea	Risk of RDS .management ,types of apnea &management &prognosis
	Neonatal jaundice	Types &risk with management of NNJ
3	Hemolytic disease of newborn &treatment of jaundice	Risk of ABO &Rh ,treatment &outcome
	Birth injuries	Types ,management &outcome
4	Pre&post maturity ,IUGR	Definition ,management &prognosis
	Neonatal sepsis &seizure	Types &sequel &management
5	Infant of DM mother &hypoglycemia	Complication &management
	N.anemia and polycythemia	Management & outcome
6	Introduction to renal disease	Renal physiology.investigation ,congenital anomalies
	Pediatric nephrosis	Definition ,criteria of DX.treatment .outcome
7	AGN(nephritis)	Etiology .treatment .prognosis
	UTI in children	Risk factors.presentation.follow up
8	Hemolytic ureamic syndrome	Pathogenesis.presentation.bad prognosis
	Acute renal failure	Types .treatment .prognosis
9	Chronic renal disease	Pathogenesis presentation ,out come
	Ped. Infectious diseases ,viral ,bacterial &parasitic(introduction)	How to deal with infectious diseases
10	IMN, hepatitis A	Presentation &management
	Typhoid fever &brucellosis	Pathogenesis,presentation,management.complication

11	**Tuberculosis**	**Pathogenesis ,presentation ,DX &treatment**
	v. cholera	**Presentation ,complication & treatment**
12	**Giardia &E.histolytica**	**DX.treatment .complication &prevention**
	Kala azar &enterobiasis	**Presentation .complication &treatment**
13	**Cardiac disease**	**Evaluation of cardiac Dis .investigation**
	CHD (ASD.VSD.PDA.AS)	**Evaluation of different acyanotic CHD with management**
14	**Heart failure**	**Pathophysiology ,presentation and management**
	Cyanotic CHD (TOF.TGA.truncus arteriosus)	**Pathophysiology ,presentation .natural history of disease**
15	**Rheumatic fever prophylaxis**	**Criteria of diagnosis ,complication &long term**
	Introduction to hematooncology in pediatrics	**Evalution of blood disease ,investigation**

The academic description of the College of Medicine was completed under the direct supervision of the



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