Ministry of Higher Education and Scientific Research

Scientific Supervision and Scientific Evaluation Apparatus

Directorate of Quality Assurance and Academic

Accreditation

Academic Program Description

2025-2026

Academic Program Description Form

University Name: Misan
Faculty/Institute: Medicine
Scientific Department: Medicine
Academic or Professional Program Name: Bachelor of Medicine and General Surgery
Final Certificate Name: M.B.Ch.B.
Academic System: annual
Description Preparation Date: 1/6/2025
File Completion Date: 20/8/2025

Signature:

Head of Department Name:Prof. Dr. Redha Alwan Hasan

Date: 2/ 8/ 2025

Signature:

Scientific Associate Name: Prof. Haider Sa'adon Qasim

Date: 2/ 8/ 2025

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Assist Prof. Mohammed Mahdi Khallawi

Signature:

Date: 3/8/2025

Approval of the Dean

Prof. Dr. Redha Alwan Hasan

UNIVERSITY OF MISAN COLLEGE OF MEDICINE
DEAN'S OFFICE

1. Program Vision

The College of Medicine at the University of Misan seeks to be a leader in providing outstanding medical education to graduate physicians who have the ability to work with caution and excellence in Iraq and abroad.

2. Program Mission

The Medical college aims to prepare competent doctors who can accomplish their tasks in various diagnostic, therapeutic and preventive health services, locally and regionally, who possess the basic requirements such as scientific knowledge, professional and behavioral skills, and who can keep pace with developments in various medical fields. It also aims to prepare scientific, social, and attitudinal research to ensure outcomes that meet health challenges and public health needs.

3. Program Objectives

- Provide students with comprehensive foundational and clinical medical knowledge.
- Develop students' clinical skills and problem-solving abilities.
- Emphasize medical ethics, patient communication, and social responsibility.
- Foster scientific research awareness and evidence-based medical practice.
- Prepare graduates for residency training or medical practice.

4. Program Accreditation

The program follows the standards of the Iraqi Ministry of Higher Education and Scientific Research and designs its curriculum with reference to international medical education standards.

5. Other External Influences

The program is funded by the University of Misan and collaborates with the Misan Health Directorate to provide clinical teaching resources.

6. Program Structure

Program Structure	Number of Courses	Total Credit Hours	Percentage	Remarks
University Requirements	4 subjects	270 hrs.	6.5%	
College Requirements	40 subjects	3.870 hrs.	93.5%	• College of Medicine is an independent faculty • Integrated basic and clinical courses
Department Requirements	1st year: 6 subjects 2nd year: 5 subjects 3rd year: 7 subjects 4th year: 7 subjects 5th year: 9 subjects 6th: year: 4 subjects	330 435 465 480 510 ≈ 500	12.13% 16.00% 17.10% 17.65% 18.75% 18.38%	
Summer Training	Yes	≈ 90		
Others	Research projects, Community Medicine practice			Encouraged student participation

7. Program Description

- **First Year**

Subject	Code	Practical Hours	Theoretical Hours
Human Anatomy	MD1ANA01	60	90
Medical Chemistry	MD1CHEM01	60	60
Medical Physics	MD1PHY01	60	60
Medical Biology	MD1BIO01	30	30
Foundation	MD1FND01	15	30
Computer Sciences	MD1COM01	15	30
Arabic Language	MD1ARB01	30	30
Medical Terminology	MD1TERM01	30	30
Human Rights	MD1HRM01	0	30
Total		**270**	**420**

- **Second Year**

Unit	**Code**	**Practical Hours**	**Theoretical Hours**
Human Anatomy	MD2ANA02	60	120
Clinical Chemistry	MD2CHM02	60	90
Physiology	MD2PHY02	150	120
Histology	MD2HIST01	60	60
Embryology	MD2EMBR01	30	30
Baath Crimes	MD2POL01	15	30
Computer Sciences	MD2COM01	30	30
Arabic Language	MD2ARB01	30	30
Total		**270**	**525**

- **Third Year**

Unit	**Code**	**Practical Hours**	**Theoretical Hours**
Internal Medicine	MD3MED01	30	45
Surgery	MD3SUR01	90	90
Microbiology	MD3MIC01	90	90
Pharmacology	MD3PHR01	60	60
Parasitology	MD3PAR01	120	120
Pathology	MD3PTH01	30	30
Family Medicine	MD3FAM01	30	30
Total		**390**	**465**

- **Fourth Year**

Unit	Code	Practical Hours	Theoretical Hours
Internal Medicine	MD4MED02	120	120
Surgery	MD4SUR002	90	90
Obstetrics	MD4OBS01	60	60
Pediatrics	MD4PED01	30	30
Family Medicine	MD4FAM02	90	90
Forensic Medicine	MD4FOR01	60	60
Medical Ethics	MD4ETH01	30	30

Total		**420**	**480**

- **Fifth Year**

Unit	**Code**	**Practical Hours**	**Theoretical Hours**
Internal Medicine	MD5MED03	90	90
Surgery	MD5SUR03	120	120
Gynecology	MD5GYN01	60	60
Pediatrics	MD5PED02	90	90
Psychiatry	MD5PSY01	30	30
Dermatology	MD5DER01	30	30
ENT	MD5ENT01	30	30
Ophthalmology	MD5OPH001	30	30
Radiology	MD5RAD001	30	30
Total		**390**	**510**

- **Sixth Year**

Unit	**Code**	**No. unit**
Internal Medicine	MD6MED04	12
Surgery	MD6SUR04	12
Obstetrics & Gynecology	MD6OBG01	10
Pediatrics	MD6PED03	10
Total		**360**

8. Expected Learning Outcomes of the Program

Category	**Learning Outcome Code**	**Learning Outcome Statement**
Knowledge & Understanding	**A1**	Demonstrate a comprehensive understanding of normal human anatomy, physiology, and biochemistry across the lifespan.
	A2	Explain the pathological, microbiological, and immunological mechanisms underlying common acute

		and chronic diseases.
	A3	Apply evidence-based principles of pharmacology and therapeutics in clinical decision-making and patient management.
	A4	Analyze epidemiological data and public health principles to prevent disease and promote community health.
Cognitive & Clinical Skills	**B1**	Take a thorough, accurate, and empathetic medical history from patients across diverse backgrounds.
	B2	Conduct systemic and focused physical examinations efficiently while maintaining patient comfort and safety.
	B3	Formulate appropriate differential diagnoses and construct rational, cost-effective diagnostic plans.
	B4	Perform essential clinical and diagnostic procedures correctly in accordance with standard operating guidelines.
Interpersonal & Communication Skills	**C1**	Communicate clinical findings, management plans, and risks clearly to patients, families, and healthcare teams.
	C2	Demonstrate effective collaboration and conflict resolution within multidisciplinary healthcare teams.
	D1	Adhere strictly to ethical guidelines, maintaining patient confidentiality, autonomy, and informed consent.
	D2	Commit to continuous self-assessment, lifelong learning, and reflective clinical practice.

9. Teaching and Learning Strategy

- **Theoretical Teaching**: Classroom lectures, electronic slides, case discussions
- **Practical Teaching**: Laboratory sessions, clinical skills training, bedside teaching
- **Interactive Learning**: Group discussions, role-playing, simulated patients
- **Self-Directed Learning**: Recommended reading, online resources, participation in research projects

10. Evaluation Methods

- **Formative Assessment**: Class participation, quizzes, lab reports
- **Summative Assessment**: Midterm exams, final exams, clinical skills assessment (OSCE)
- **Comprehensive Assessment**: Comprehensive national exam for the sixth stage.

11. Faculty

Faculty Members						
Academic Rank	**Specialization**		**Special Requirements/Skills (if applicable)**		**Number of the teaching staff**	
	General	**Special**			**Staff**	**Lecturer**
Professors		10			10	1
Assist. Professors		24			24	
Lecturers		17			17	
Assist. Lecturers		18			18	

12. Admission Criteria

- Pass the national unified secondary school examination with scores meeting the medical college admission threshold
- Pass interviews and psychological tests (if applicable)
- Possess good proficiency in Arabic and English language.

13. Main Sources of Information About the Program

- University of Misan official website, College of Medicine brochures

- Course syllabi and textbooks
- Academic journals, international medical education databases

14. Program Development Plan

- Continuously update curriculum content, incorporating international medical education standards
- Strengthen clinical skills training center development
- Promote faculty training and international exchange
- Establish more partnerships with teaching hospitals
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Distribution of outputs according to courses

Year	Course Code	Course Name	Basic or optional	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
1st	MD1-ANAT	Human Anatomy	Basic	✔											
	MD1-CHEM	Medical Chemistry	Basic	✔											
	MD1-PHYS	Medical Physics	Basic	✔											
	MD1-BIOL	Medical Biology	Basic	✔											
	MD1-FOUND	Foundation	Basic	✔											
	MD1-TERM	Medical Terminology	Basic	✔											
2nd	MD2-ANAT	Human Anatomy	Basic	✔											
	MD2-CHEM	Clinical Chemistry	Basic	✔											
	MD2-PHYSIO	Physiology	Basic	✔											
	MD2-HIST	Histology	Basic	✔											
	MD2-EMBRYO	Embryology	Basic	✔											
3rd	MD3-MED	Internal Medicine	Basic		✔			✔	✔			✔	✔		
	MD3-SUR	Surgery	Basic		✔			✔	✔			✔	✔		
	MD3-MICRO	Microbiology	Basic	✔											
	MD3-PHARMA	Pharmacology	Basic	✔											
	MD3-PARA	Parasitology	Basic	✔											
	MD3-PATH	Pathology	Basic	✔											
	MD3-FAM	Family Medicine	Basic		✔	✔	✔	✔				✔	✔	✔	
4th	MD4-MED	Internal Medicine	Basic		✔			✔	✔			✔	✔		
	MD4-SUR	Surgery	Basic		✔			✔	✔			✔	✔		
	MD4-OBS	Obstetrics	Basic		✔			✔	✔			✔	✔		
	MD4-PED	Pediatrics	Basic		✔			✔	✔			✔	✔		
	MD4-FAM	Family Medicine	Basic		✔	✔	✔	✔				✔	✔	✔	
	MD4-FOR	Forensic Medicine	Basic		✔							✔			
	MD4-ETH	Medical Ethics	Basic			✔						✔	✔	✔	
5th	MD5-MED	Internal Medicine	Basic		✔			✔	✔	✔		✔	✔		
	MD5-SUR	Surgery	Basic		✔			✔	✔	✔		✔	✔		
	MD5-GYN	Gynecology	Basic		✔			✔	✔			✔	✔		
	MD5-PED	Pediatrics	Basic		✔			✔	✔			✔	✔		

	MD5-PSY	Psychiatry	Basic			✔						✔	✔		
	MD5-DER	Dermatology	Basic		✔			✔	✔			✔	✔		
	MD5-ENT	ENT	Basic		✔			✔	✔			✔	✔		
	MD5-OPH	Ophthalmology	Basic		✔			✔	✔			✔	✔		
	MD5-RAD	Radiology	Basic		✔				✔						
6th	MD6-MED	Internal Medicine	Basic		✔			✔	✔	✔		✔	✔	✔	
	MD6-SUR	Surgery	Basic		✔			✔	✔	✔		✔	✔	✔	
	MD6-OBG	Obstetrics & Gynecology	Basic		✔			✔	✔	✔		✔	✔	✔	
	MD6-PED	Pediatrics	Basic		✔			✔	✔	✔		✔	✔	✔	

Education Program Description

First year

Subject: Human Anatomy

First year

1. Scientific Department: Human Anatomy Dept.

2. content: Theoretical and Practical

3. Semester / Year: Annual

4. Total Study Hours:

150 hours / First Year (90 theoretical hours + 60 practical hours).

6. Date of This Description Preparation: 10/25/2025

7. Course Objectives:

- Preparing doctors with strong basic sciences to aid in understanding pathological conditions and diagnosis.
- Familiarizing students with modern methods used in pathological analyses and practically understanding anatomical changes in pathological cases.

8. Course Outcomes, Teaching/Learning Methods, and Assessment:

1. **Cognitive Objectives:** Preparing students with high competence in the theoretical and practical foundations of Human Anatomy and methods for applied clinically.
2. **Course-Specific Skill Objectives:** Equipping students with advanced skills in pathological diagnostics to obtain accurate results for disease diagnosis.

9. Teaching and Learning Methods:

1. Using modern teaching methods.
2. Using modern methods in the field of Human Anatomy.

10. Assessment Methods:

Daily, monthly, and final exams.

11. Affective and Value Objectives:

1. Encouraging students to interact humanely with patients in line with human values.

d. General and Transferable Skills (Other skills related to employability and personal development):

1. Preparing scientifically competent students to solve health problems.

9. Course Structure:

Week	Hours	Academic Year	Teaching Method	Assessment Method
30 weeks	60 Theoretical	First Year	Theoretical + Practical	Daily Exams + Monthly + Semester
	60 Practical	Human Anatomy		
30 weeks	90 Theoretical	Second Year	Theoretical + Practical	Daily Exams + Monthly + Semester
	60 Practical	Human Anatomy		

Sources for Curriculum Development:

- Anatomy Basis of Life (First Year)
- Advance Anatomy (First Year)
- Advance Anatomy (First Year)
- Harper's Illustrated Anatomy (Second Year)

Course Environment: First Semester, First Year.

Date / Week	Lecturer	Hours	Lecture Title
1st	Dr. Sami Khalaf	4	Skull, Osteology - Views of the skull
2nd	Dr. Sami Khalaf	2	Skull, Osteology, Views of the skull
2nd	Dr. Sami Khalaf	2	Boundaries and contents of Temporal fossa, Infratemporal fossa, Pterygopalatine fossa
3rd	Dr. Sami Khalaf	2	Scalp & Face — Muscles, innervation, blood supply
3rd	Dr. Sami Khalaf	2	Oral cavity and salivary gland
4th	Dr. Sami Khalaf	2	Introduction, Nervous tissue, CNS, PNS, ANS, Neuroglial cells - terms related
4th	Dr. Sami Khalaf	1	Meninges — Dural folds, Cranial venous sinuses
4th	Dr. Sami Khalaf	1	Divisions of brain
5th	Dr. Sami Khalaf	1	Cerebral hemispheres — External and internal structures
5th	Dr. Sami Khalaf	1	Basal ganglia

6th	Dr. Sami Khalaf	1	Ventricles of the brain
6th	Dr. Sami Khalaf	1	Brainstem, Midbrain
7th	Dr. Sami Khalaf	1	Diencephalon
7th	Dr. Sami Khalaf	1	Pons
8th	Dr. Sami Khalaf	1	Cerebellum
8th	Dr. Sami Khalaf	1	Blood supply of the brain
8th	Dr. Sami Khalaf	1	Cerebrospinal fluid
9th	Dr. Sami Khalaf	2	Spinal cord — External and internal features
9th	Dr. Sami Khalaf	2	Tractology of the spinal cord
10th	Dr. Sami Khalaf	1	Pyramidal and extrapyramidal system
10th	Dr. Sami Khalaf	1	Cranial nerves
11th	Dr. Sami Khalaf	1	Neck — Surface anatomy, Superficial fascia
11th	Dr. Sami Khalaf	2	Triangles of the neck — Posterior triangle: muscles, vessels, nerves and associated structures
12th	Dr. Sami Khalaf	2	Anterior triangle — Muscles, vessels, nerves and associated structures; Thyroid gland
12th	Dr. Sami Khalaf	2	Main veins, arteries and nerves of the neck; Cervical plexuses
13th	Dr. Sami Khalaf	1	Nasal cavity, Paranasal sinuses
13th	Dr. Sami Khalaf	1	Pharynx, muscles, sensory & motor innervations and associated structures
13th	Dr. Sami Khalaf	2	Larynx & Trachea — Muscles, sensory and motor innervations, associated structures
14th	Dr. Sami Khalaf	2	Ear, and related structures
14th	Dr. Sami Khalaf	4	Orbit and eyeball
Mid-year	Mid-year	Mid-year	Mid-year
16th	Dr. Ihsan Sukkar	2	Abdomen — Anterior abdominal wall, muscles and associated structures; Posterior abdominal wall, muscles and associated structures
17th	Dr. Ihsan Sukkar	1	Inguinal canal, Inguinal hernia, Spermatic cord
17th	Dr. Ihsan Sukkar	1	Peritoneum, Arrangement of abdominal viscera
17th	Dr. Ihsan Sukkar	1	Gastrointestinal tract — Esophagus

18th	Dr. Ihsan Sukkar	1	Stomach
18th	Dr. Ihsan Sukkar	1	Small intestine, Large intestine — Blood vessels, nerves, lymphatics and associated structures
18th	Dr. Ihsan Sukkar	2	Liver and biliary system
19th	Dr. Ihsan Sukkar	1	Spleen
20th	Dr. Ihsan Sukkar	1	Pancreas
20th	Dr. Ihsan Sukkar	2	Retroperitoneal structures — Kidney, Suprarenal gland
21st	Dr. Ihsan Sukkar	1	Lumbar plexuses
22nd	Dr. Ihsan Sukkar	2	Pelvis: Pelvic skeleton and bony pelvis
23rd	Dr. Ihsan Sukkar	2	Contents of pelvic diaphragm, Visceral pelvic fascia
24th	Dr. Ihsan Sukkar	1	Pelvic viscera in male
25th	Dr. Ihsan Sukkar	1	Pelvic viscera in female
26th	Dr. Ihsan Sukkar	2	Perineum — Urogenital diaphragm; Contents of male genital triangle; Contents of urogenital diaphragm in male and female
27th	Dr. Ihsan Sukkar	1	Contents of anal triangle — Anal canal
28th	Dr. Ihsan Sukkar	1	Ischiorectal fossa
29th	Dr. Ihsan Sukkar	2	Clinical notes

College of Medicine - Department of Human Anatomy

Course Description Form

The department teaches the **Medical Biology** course for the first academic stage through theoretical lectures and practical laboratories.

Course Objectives:

- Adherence to the academic calendar for teaching theoretical and practical subjects to first-stage students.
- Paying attention to the examination method and making it a means of evaluation for students.

The department teaches the Medical Biology course for the first academic stage through theoretical lectures and practical laboratories. **Course Objectives:**

- Adherence to the academic calendar for teaching theoretical and practical subjects to first-stage students.
- Paying attention to the examination method and making it a means of evaluation for students.

1. Name of the Educational Institution: College of Medicine

2. Scientific Department: Department of Human Anatomy

3. Available Attendance Modes: Theoretical and Practical

4. Semester / Year: Annual

5. Total Number of Credit Hours: 60 Theoretical Hours - 60 Practical Hours / First Stage

6. Date of Preparing This Description: 22/9/2025

7. Course Objectives

- Understanding and studying the fine structure of human cells, their components, shapes, different functions, mechanisms of ion transport across the plasma membrane, the chemical composition of cells, and studying various cellular organelles along with their structures and functions.
- Linking scientific concepts with diseases caused by functional defects in cellular organelles inside living cells, studying them extensively to highlight the role of organelles in cell life and vitality.
- Studying the methods of cell division in living cells to enrich student concepts in cell division, studying the nature of chromosomes and how to control the regularity of these divisions, and studying checkpoints and how division errors occur that lead to tumor formation.
- Understanding and studying the structure of nucleic acids (DNA and RNA), genetic genes, mutations occurring in them, resulting genetic diseases, and self-repair mechanisms for errors.
- Studying modern methods in diagnosis and disease monitoring.

8. Course Learning Outcomes, Teaching, Learning, and Assessment Methods

A. Cognitive Objectives:

- Providing students with specialized scientific skills and concepts related to the study of Medical Biology and its importance in diagnosis and treatment.

B. Course Specific Skill Objectives:

- Studying the impact of pathological variables on the basic structure of the human body.

Teaching and Learning Methods:

1. Using modern teaching methods.
2. Training students inside the laboratory using modern techniques.

Assessment Methods:

1. Daily, midterm, and final examinations.

C. Affective and Value Objectives:

1. Preparing doctors who are capable of understanding others and perceiving the extent of their pain, understanding patients' problems, and treating them.
2. Preparing doctors capable of prioritizing the patient's best interest without any discrimination related to human rights, in addition to maintaining confidentiality regarding everything related to the patient and all information obtained.

D. General and Transferable Skills (Other skills related to employability and personal development):

1. Preparing scientifically competent students to solve health problems.

9. Course Structure

Weeks	**Hours**	**Academic Stage**	**Teaching Method**	**Assessment Method**
30	2	First Stage	Theoretical +	Daily + Midterm + Semester

Weeks	Theoretical 2 Practical		Practical	Examinations

10. Course Curriculum References

- *Human Biology* by Sylvia S. Mader

Weekly Schedule

Week	Lecturer	Topic	Teaching Method	Assessment Method
1	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Introduction to cell biology, Types of cell, cell theories.	Theoretical + Practical	—
2	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Living status of the cell, living properties of the protoplasm, and General structure of a cell.	Theoretical + Practical	Midterm / Final / Quiz
3	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Chemistry of the cell (inorganic & organic molecules).	Theoretical + Practical	Midterm / Final / Quiz
4	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	The organic materials of the cell: Proteins, Lipid, Carbohydrates, and Nucleic acids.	Theoretical + Practical	—
5	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Molecular organization of plasma membrane & functions.	Theoretical + Practical	Midterm / Final / Quiz

6	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Modification of the plasma membrane	Theoretical + Practical	—
7	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Molecules crossing the plasma membrane	Theoretical + Practical	Midterm / Final / Quiz
8	Dr. Auras Naji Asst. Lect. Hawraa Khalaf Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Structure and functions of cytoplasmic organelles (ribosome, endoplasmic reticulum, Golgi complex, mitochondria, lysosome, peroxisomes, centrioles, cilia and flagella).	Theoretical + Practical	—
9	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Cytoplasm (cytoskeleton, cytosol and cytoplasmic inclusions).	Theoretical + Practical	Midterm / Final / Quiz
10	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Structure and functions of the nucleus (nucleolus, nuclear membrane, chromatin and nucleoplasm).	Theoretical + Practical	—
11	Dr. Auras Naji Asst. Lect. Hawraa	Cell cycle and cell division	Theoretical + Practical	—

	Khalaf			
12	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Gametogenesis	Theoretical + Practical	—
13	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Cellular energy.	Theoretical + Practical	Midterm / Final / Quiz
14	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Cellular activity	Theoretical + Practical	Midterm / Final / Quiz
15	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Cellular differentiation	Theoretical + Practical	—
16	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Cellular specialization.	Theoretical + Practical	—
17	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Cellular aging.	Theoretical + Practical	Midterm / Final / Quiz
18	Dr. Auras Naji Asst. Lect.	Genetic terminology	Theoretical + Practical	—

	Hawraa Khalaf			
19	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Mendel's 1st law and 2nd law.	Theoretical + Practical	Midterm / Final / Quiz
20	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Mode of Mendelian inheritance	Theoretical + Practical	—
21	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Deviation from Mendelian laws.	Theoretical + Practical	—
22	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Linkage and sex-linked inheritance	Theoretical + Practical	—
23	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Molecular basis of crossing over	Theoretical + Practical	Midterm / Final / Quiz
24	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Human chromosomes	Theoretical + Practical	Midterm / Final / Quiz
25	Dr. Auras Naji	Numerical aberrations	Theoretical + Practical	—

	Asst. Lect. Hawraa Khalaf			
26	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Structural aberrations	Theoretical + Practical	Midterm / Final / Quiz
27	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	DNA structure and replication	Theoretical + Practical	—
28	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	RNA structure and translocation	Theoretical + Practical	Midterm / Final / Quiz
29	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Epithelial tissue	Theoretical + Practical	—
30	Dr. Auras Naji Asst. Lect. Hawraa Khalaf	Connective tissue	Theoretical + Practical	Midterm / Final / Quiz

Subject: Medical Chemistry – 1st Year

University of Misan / College of Medicine

Chemistry and Biochemistry department

- **Course Objectives:**
  - Adherence to the university calendar for teaching theoretical and practical subjects for first and second-year students.

Educational Institution Name	College of Medicine
Scientific Department	Chemistry and Biochemistry Branch
Available Attendance Format	Theoretical and Practical
Semester / Year	Annual
Total Study Hours	Hours (First Year) 60/60 theoretical hours 120/120 practical hours) 150/150 hours Second Year 90/90 theoretical hours 60/60 practical hours) 2023/4/10

  - Emphasis on examination methods as a means of assessment for students.

6. Date of Preparation of this Description

7. Course Objectives:

- To prepare graduates possessing strong foundational sciences that aid in understanding pathological conditions and diagnosis.
- To familiarize with modern methods used in pathological analyses and to practically understand biochemical changes in pathological conditions.

8. Course Outcomes, Teaching/Learning Methods, and Assessment Methods:

a. **Cognitive Objectives:** To prepare highly competent students in both the theoretical and practical aspects of Biochemistry and modern techniques for conducting pathological analysis.

b. **Course-Specific Skill Objectives:** To equip students with high-level skills in the field of pathological analysis to obtain accurate results for disease diagnosis.

Teaching/Learning Methods:

1. Use of modern teaching methods.
2. Use of modern methods in the field of biochemical analysis.

Assessment Methods:

1. Daily, periodic, and final exams.
2. Affective and value-based objectives.
3. Encouraging students to deal with disease appropriately in line with fundamental values.

d. General and Transferable Executive Skills (Other skills related to employability and personal development).

1- To prepare scientifically competent students to solve health problems.

9. Course Environment

Week	**Hours**	**Study Year**	**Teaching Method**	**Assessment Method**
30 wks.	60 Theoretical Practical	First Year Chemistry & Biochemistry	Theoretical + Practical	Daily + Monthly + Periodic Exams
30wks.	90 Theoretical Practical	Second Year Biochemistry	Theoretical + Practical	Daily + Monthly + Periodic Exams

10. Curriculum Development Sources

Chemical basis of life (first Year)
Advance organic chemistry (first Year)
Advance analytical chemistry (first Year)
Harpers illustrated biochemistry (second Year)

11. Course Environment:

First Semester, First Year

Week	Hours	Unit / Course or Topic Name	Teaching Method	Assessment Method
First	2	Introduction	Theoretical	Periodic/Final/CW
Second	1	Definition, classification, biological roles of carbohydrates (Biochemistry)	Theoretical	Periodic/Final/CW
Third	2	Radioactivity, radiation dosages medical uses of radioactive isotopes (Analytical chemistry)	Theoretical	Periodic/Final/CW
Fourth	1	Monosaccharides and study of biological activity (Biochemistry)	Theoretical	Periodic/Final/CW
Fifth	2	Squamous solutions, solubility, concentrations of solutions. Electrolytes & nonelectrolytes (Analytical chemistry)	Theoretical	Periodic/Final/CW
Fifth	1	Study the reactions of Monosaccharides (Biochemistry)	Theoretical	Periodic/Final/CW
Sixth	2	Acid and Bases, pH buffer acid-base balance in blood. (Analytical chemistry)	Theoretical	Periodic/Final/CW
Seventh	1	Disaccharides and study of biological activity (Biochemistry)	Theoretical	Periodic/Final/CW
Eighth	1	Colloids and their properties, emulsions, emulsifying agents, dialysis, hemodialysis. (Analytical chemistry)	Theoretical	Periodic/Final/CW
Sixth	2	Polysaccharides and study of biological roles (Biochemistry)	Theoretical	Periodic/Final/CW
Seventh	1	Methods of expression of concentration (Analytical chemistry)	Theoretical	Periodic/Final/CW
Eighth	1	Mucopolysaccharides & glycoproteins (Biochemistry)	Theoretical	Periodic/Final/CW
Eighth	1	Elements and their roles in human body (Analytical chemistry)	Theoretical	Periodic/Final/CW

First Semester Exams

Week/Unit	Hours	Topic (Subject)	Type	Assessment
Tenth	2	Definition & Classification of Lipids (Biochemistry)	Theoretical	Periodic/Final/CW
Eleventh	2	Fatty Acids, Prostaglandins (Biochemistry)	Theoretical	Periodic/Final/CW
Twelfth	2	Glycolipids, Sphingolipids & Lipoproteins (Biochemistry)	Theoretical	Periodic/Final/CW
Thirteenth	2	Definition of Hormones (Biochemistry)	Theoretical	Periodic/Final/CW
Fourteenth	2	Classification of Hormones (Biochemistry)	Theoretical	Periodic/Final/CW
Fifteenth	2	Chemistry & Functions of Hormones (Biochemistry)	Theoretical	Periodic/Final/CW

Practical - First Semester, First Year

Week	Hours	Unit / Course or Topic Name	Teaching Method
First	2	General laboratory apparatuses, safety procedures & first Aid	Practical
Second	2	instruments and equipment's	Practical
Third	2	Acid-Base titration	Practical
Fourth	2	The standardization of basic solutions	Practical
Fifth	2	Analysis of antacid tablets	Practical
Sixth	2	Quantitative analysis of vitamin C contained in foods	Practical
Seventh	2	Measurement of the active ingredient in aspirin pills	Practical
Eighth	2	Monthly exams for Chemistry and Biochemistry	Practical

First Semester Exams (Practical)

Week/Unit	Hours	Topic (Subject Area)	Type	Assessment
Tenth	2	Carbohydrates: (Molisch Test, Benedict's Test)	Practical	Periodic/Final/CW
Eleventh	2	Carbohydrates: (Barfoed's Test, Bial's	Practical	Periodic/Final/CW

		Test)		
Twelfth	2	Carbohydrates: (Seliwanoff's Test & Iodine Test)	Practical	Periodic/Final/CW
Thirteenth	2	Lipids: (Grease Stain Test, Reaction Test)	Practical	Periodic/Final/CW
Fourteenth	2	Lipids: (Copper Acetate Test)	Practical	Periodic/Final/CW
Fifteenth	2	Lipids: (Reaction of Soap & Cholesterol)	Practical	Periodic/Final/CW

Second Semester, First Year

Week	Hours	Unit / Course or Topic Name	Teaching Method	Assessment Method
First	2	Definition, classification of protein (Biochemistry)	Theoretical	Periodic/Final/CW
	1	Carbonyl group aldehydes and ketones (Organic chemistry)	Theoretical	Periodic/Final/CW
Second	2	Properties, & reactions of protein (Biochemistry)	Theoretical	Periodic/Final/CW
	1	Carboxylic acid (Organic chemistry)	Theoretical	Periodic/Final/CW
Third	2	Structure, conformation & denaturation of protein (Biochemistry)	Theoretical	Periodic/Final/CW
	1	Amide (Organic chemistry)	Theoretical	Periodic/Final/CW
Fourth	2	Peptide bond, glutathione, insulin & glucagons. (Biochemistry)	Theoretical	Periodic/Final/CW
	1	Esters (Organic chemistry)	Theoretical	Periodic/Final/CW
Fifth	2	Functional role: Hb, glycoprotein, collagen (Biochemistry)	Theoretical	Periodic/Final/CW
	1	Alcohols and phenol (Organic chemistry)	Theoretical	Periodic/Final/CW
Sixth	2	Protein technology (Biochemistry)	Theoretical	Periodic/Final/CW
	1	Stereochemistry (Organic chemistry)	Theoretical	Periodic/Final/CW
Seventh	2	Enzymes : Nature, nomenclature, & classifications & types of kinetic	Theoretical	Periodic/Final/CW

		reactions (Biochemistry)		
	1	Sulpha drugs (Organic chemistry)	Theoretical	Periodic/Final/CW
Eighth	2	Mechanism of action, factors affecting enzyme activity, & control of activity (Biochemistry)	Theoretical	Periodic/Final/CW
Ninth	2	Nucleotides : biomedical importance unusual bases & their significance (Biochemistry)	Theoretical	Periodic/Final/CW
Tenth	2	synthetic nucleotide analogues & their medical importance (Biochemistry)	Theoretical	Periodic/Final/CW
Eleventh	2	Metabolism of the purine & pyrimidine nucleotides (Biochemistry)	Theoretical	Periodic/Final/CW
Twelfth	2	*De novo* & salvage biosynthetic Pathways & their regulation (Biochemistry)	Theoretical	Periodic/Final/CW
Thirteenth	2	Catabolic pathways (Biochemistry)	Theoretical	Periodic/Final/CW
Fourteenth	2	Disorders of the purine & pyrimidine metabolism: hyperuricemia, orotic aciduia, adenosine deaminase deficiency (Biochemistry)	Theoretical	Periodic/Final/CW
Fifteenth	2	End of second semester exam	Theoretical	Periodic/Final/CW

Practical - Second Semester, First Year

Week	Hours	Unit / Course or Topic Name	Teaching Method	Assessment Method
1st	2	Amino Acids & Proteins: (Ninhydrin test, Xanthoprotic test)	Practical	Periodic/Final/ CW
2nd	2	Amino Acids & Proteins: (Rosenheim test, Millon's test)	Practical	Periodic/Final/ CW
3rd	2	Amino Acids & Proteins: (Nitroprusside, Sakaguchi)	Practical	Periodic/Final/ CW
4th	2	Amino Acids & Proteins: (Biuret	Practical	Periodic/Final/

		Tests)		CW
5th	2	TLC Chromatography of Amino Acids	Practical	Periodic/Final/ CW
6th	2	Identification of hydrocarbons. (Combustion reaction, Reaction with bromine)	Practical	Periodic/Final/ CW
7th	2	Identification of hydrocarbons. (Reaction with potassium permanganate)	Practical	Periodic/Final/ CW
8th	2	Identification of Aldehydes and ketones. (Chromic acid test, Tollens' test)	Practical	Periodic/Final/ CW
9th	2	Identification of Aldehydes and ketones. (2,4-Dinitrophenylhydrazine test, Oxime and Semicarbazone)	Practical	Periodic/Final/ CW
10th	2	Identification of alcohols and phenols. (Lucas test)	Practical	Periodic/Final/ CW
11th	2	Identification of alcohols and phenols. (Acidity of phenol and Iron(II)chloride test)	Practical	Periodic/Final/ CW
12th	2	Identification of alcohols and phenols. (Chromic acid test)	Practical	Periodic/Final/ CW
13th	2	UV-visible spectroscopy	Practical	Periodic/Final/ CW
14th	2	Collecting of blood samples and separating of serum from whole blood by using centrifuge	Practical	Periodic/Final/ CW
15th	2	Practical exam	Practical	Periodic/Final/ CW

Week	Hours	Unit / Course or Topic Name
1st	3	**Metabolism of carbohydrate** Glycolysis and Gluconeogenesis
2nd	3	Citric acid cycle and oxidative phosphorylation Hexose monophosphate shunt.
3rd	3	Role of hexose monophosphate shunt in metabolism of WBG and in glucose-6-phosphate deficiency (fauvism).
4th	3	Glycogen metabolism. Factors which maintain blood glucose level constant.
5th	3	Diabetes mellitus. Digestion and absorption of carbohydrate
6th	3	Metabolism of lipids Classification of lipids. Plasma lipids
7th	3	Fatty acid synthesis. Oxidation of fatty acid. Phospholipid metabolism
8th	3	Cholesterol metabolism. Lipoprotein metabolism. Digestion and absorption of fat.

Subject: Medical Physics- 1st Year

Medical Physics: Syllabus and Scientific Material

Academic Year 2025-2026

First Year

1.1 Course Description

Medical Physics is an interdisciplinary science that applies the principles and methodologies of physics to understand the functional mechanisms of the human body and to advance medical diagnosis, treatment, and healthcare technologies. The field integrates the physics of physiology – examining mechanical, thermal, electrical, and acoustic processes in the musculoskeletal, cardiovascular, respiratory, and sensory systems – with the application of physics in medical practice, encompassing the operation and optimization of clinical instruments such as stethoscopes, ultrasound, lasers, X-ray imaging, nuclear medicine, computed tomography (CT) and magnetic resonance imaging (MRI), as well as radiation therapy and protection. In particular, lasers play a pivotal role in modern medicine, with applications ranging from vision correction procedures such as LASIK and cataract surgery, to dermatological treatments including skin resurfacing, scar reduction, and vascular lesion therapy, and surgical interventions where laser ablation, cutting, and coagulation enhance precision and reduce tissue trauma. This course provides a rigorous combination of theoretical instruction and practical laboratory experience, equipping students with the skills to quantitatively analyze physiological phenomena, understand the physical principles

underlying medical devices and apply this knowledge safely and effectively in clinical and research settings.

1.2 Importance of Medical Physics

The study of medical physics is essential as it provides the scientific foundation for:

- **Diagnostic Imaging:** Understanding how X-rays, CT scans, MRIs, and ultrasound create images, as well as advanced imaging techniques involving laser-based optical imaging.
- **Therapeutic Physics:** Grasping the principles of radiation therapy used in oncology, including laser-based treatments such as photocoagulation and laser ablation.
- **Physiological Measurement:** Understanding the function of instruments like ECGs, audiometers, blood pressure monitors, and laser-based devices for blood flow measurement or tissue oxygenation.
- **Health Physics:** Ensuring radiation and laser safety for both patients and medical staff.
- **Biomechanics:** Study the forces on and in your skeleton (the dynamics of blood and air as they move through your body).
- **Medical Lasers:** The use of lasers in surgery, dermatology, ophthalmology (vision correction), and therapy requires understanding the physics principles, tissue interactions, and safety measures involved.

1.3 Course Objectives

The objective of the first-year Medical Physics course is to provide students with an understanding of the physical principles pertaining to medical instrumentation and its applications in diagnostic imaging and physiological systems. At the completion of this course, students will be able to:

- **Explain** fundamental physical principles for application in medicine, including mechanics, heat and cold; fluids; sound and light; radiation and lasers.

- **Describe** how such medical technologies as X-ray, CT, MRI and audiometer are operating and how laser – based instruments in surgery (including vision correction), dermatology or ophthalmology function to correct or treat vision defects.

- **Integrate** theoretical knowledge with hands – on laboratory work and experiments in laser safety, optics and physiological measurements.

- **Apply** critical thinking and problem – solving for physics based medical applications, including lasers in therapy and diagnosis.

- **Develop** proficiency in basic laboratory data collection, analysis, and reporting, including measurements using light, lasers, and other medical instrumentation.

- **Foster** a strong culture and awareness of radiation and laser safety, emphasizing safe practice in both diagnostic and therapeutic medical applications.

1.4 References for Medical Physics

Primary Textbooks:

1. **Medical Physics**
   - Authors: Cameron, J.R. and Skofronick, J.G., 1978. Medical Physics. New York: Wiley.
2. **Practical Physics**
   - Armitage E., 1990. Practical Physics in SI Units. London: Heinemann

Supplementary References:

1. **Physics of the human body**
   - Herman, I. P., 2007. Physics of the human body (2nd ed.). New York, NY: Springer
2. **Practical physics**
   - **Shukla, R. K., & Srivastava, A. Practical physics. New Delhi: S. Chand.**

Journals and Online Resources:

- Medical Physics (Journal)
- Physics in Medicine & Biology (Journal)
- PubMed Central for open-access research articles

1.5 Assessment Methods

The assessment strategy evaluates the student's understanding of physical concepts, their application in medical contexts, and their laboratory skills.

The minimum requirement to pass is to achieve at least **50% of the total 100 marks**.

The marks are distributed as follows:

Assessment Component	Total Weight	Theory Weight	Practical Weight
First Course Exam	10%	7%	3%
Mid-Term Exam	20%	14%	6%
Second Course Exam	10%	7%	3%
Total (Sessional)	**40%**	**28%**	**12%**
Final Exam	60%	45%	15%
Final Total	**100%**	**73%**	**27%**

Students who fail to attain the 50% cut-off mark are required to re-sit the second attempt examination in September. Failing the re-sit examination will require the student to repeat the academic year.

1.6 Scientific Teaching Methods

The teaching of medical physics is based on student – centered approaches that promote deep understanding and application of knowledge:

1. **Lecture-Based Learning (LBL):** Structured presentations to introduce core physical concepts, principles of medical technology, and mathematical models.
2. **Laboratory-Based Practical Sessions:** Hands-on experiments to apply theoretical knowledge and develop skills in measurement, data collection, and analysis.
3. **Problem-Based Learning (PBL):** Problem-Based Learning (PBL): Student-centered sessions in which small groups analyze and solve real-life problems (e.g., calculating atmospheric pressure and gravitational constants and their effects on the body, or applying knowledge of the principles of vision to evaluate refractive errors
4. **Interactive Tutorials:** Guided discussions to clarify complex concepts (e.g., MRI physics, fluid dynamics).
5. **E-Learning and Digital Resources:** Use of virtual platforms, animations of physical processes (e.g., radioactive decay), and online quizzes.

1.7 Learning Outcomes

(What the student will be able to do at the end of the course)

1. Cognitive Domain (Knowledge)

Students will be able to:

- Describe the fundamental physical principles relevant to medicine.
- Explain the operational mechanisms of key medical technologies.
- Interpret physical data and relate it to normal and abnormal physiological function.
- Analyze how physical laws apply to physiological systems (e.g., force on bones, pressure in blood vessels.etc.).

2. Psychomotor Domain (Skills)

Students will be able to:

- Perform basic physics experiments and operate laboratory instruments (e.g., calipers, simple pendulum, calorimeter, lenses).
- Measure and record physical parameters accurately.
- Analyze and interpret experimental data, including graphical analysis.
- Prepare laboratory reports with accurate observations, results, and conclusions.

3. Affective Domain (Attitude)

Students will be able to:

- Display professional behavior and responsibility during all academic and lab activities.
- Work effectively in teams.
- Demonstrate a commitm3ent to lifelong learning.
- Show a positive attitude toward scientific inquiry and the importance of **radiation safety**.

1.8 Course Schedule: First Semester

Week	Theoretical Subject	Practical Subject (2 hours for each exp.)	Hours
1	Introduction and description of the medical physics course	Introduction, laboratory Instruments and report preparation	2
2	Terminology, Modeling, and Measurement	Different measurement instruments(Using caliper gauge with Vernier)	2
2 & 4	Force on and in the body	Levers (One –sided and two –sided lever)	4

5	Physics of the Skeleton	Acceleration of free fall by means of the simple pendulum.	2
6 & 7	Heat and Cold in Medicine	Find specific heat capacity of the (copper, steel and aluminum) by used calorimeter. + Body Temperature	4
8	First Month Exam in Medical Physics		2
9	Energy ,Work, and Power of the Body	Verify Hook's law by using Hook's apparatus.	2
10 & 11	Pressure	Use of Boyle's low apparatus to verify Boyle's law and to measure the pressure of atmosphere.	4
12	The Physics of the Lungs and Breathing	Pulmonary Function Test	2
13	Physics of the Cardiovascular System	Arterial blood pressure + Pulse Oximetry	4
14	Second Month Exam in Medical Physics		2
15	General review		2

1.9 Course Schedule: Second Semester

Week	Theoretical Subject	Practical Subject (2 hours for each exp.)	Hours
1	Sound in Medicine	Speed of sound from the fundamental and overtone resonance frequencies of resonance tube of fixed length	2
2	Physics of the Ear and Hearing	Hearing test (audiometer)	2
3	Light in Medicine	Refractive index of glass by real apparent depth using travelling microscope	2

4 & 5	Physics of Eyes and Vision	The focal length of converging lens by a graphical method + Vision test	4
6	First Month Exam in Medical Physics		2
7	Laser in medicine	Application Laser	2
8	Physics of diagnostic X-ray	The focal length of a converging lens by the lens displacement method using conjugate focal	2
9	Physics of MRI and CT Scan	Measuring the surface tension using the "break –away "method	2
10	Physics of Nuclear Medicine (Radioisotopes in Medicine)		2
11	Second Month Exam in Medical Physics		2
12	Physics of Radiation Therapy		2
13	Radiation protection in medicine		2
14	Statistics in the medical field		2
15	General review		2

Subject: FOUNDATIONS AND TERMINOLOGY

First Year

This course was introduced in 2003 in Iraqi colleges of Medicine and intended to introduce the medical student to basic concepts and terms in the medical literature recently in academic year 2010-2011 the ICD10 National classification of the diseases included in the medical terminology. The course consists of 10 lectures of foundation in the first term and

10 lectures of terminology in the second term. The detailed syllabus is given in Table below.

Table: Syllabus of foundations and terminology of medicine for 1st year medical students.

Subjects	**Hrs.**
First term / foundation	**10**
The concept of health and disease 5 lectures	
Definition of health, disease, public health, infection, infectious disease, communicable disease, incubation period, carrier, chemoprophylaxis and chemotherapy	**2**
Ecology of health	**1**
Measuring population health	
Prevention and levels of prevention	**1**
Natural history of disease	**1**
Health care and medical care	
Man and environment 5 lectures	
Definition of terms: environment, environmental health, scope of environmental health	**1**
Water and related diseases	**1**
Air pollution and health	**1**
Environment & nutrition , Environment of work	**2**
Blood borne diseases &Occupational risk associated with the job of doctors	
Second term/ terminology	**10**
Definition of **Medical Terminology, prefix and suffix and root**	**2**
Word structure rules	**3**
Body part	**2**
Daily used term	**3**

3.2.3. Student assessment

The minimum requirement of a student to be transferred to fourth year is to achieve at least 50% of the total 100 marks assigned for the course.

The marks are distributed as follows:

a. First term 10 marks based on written examination at end of the term with daily continuous assessment using approved check list plus written short examinations (quizzes)
b. Mid- year written examination: 20 marks
c. Second term 10 marks based on one written examination near the end of the term.
d. Final examinations 60 marks. The final examination consists of two parts; a comprehensive written examination using variety of questions (MCQ, matching, short answer questions, etc)

Students who fail to attain the 50% cut-off mark are required to re-sit in September for a comprehensive examinations similar to the final one (written and oral). Failing in the re-sit examination entails the student to repeat the academic year.

Subject: Computer Sciences

First Year

1. General Course Information

Item	Details
Subject Name	Computer Sciences
Year	First Year
Lecture Type	Theory & Practical
Number of Units	2
Total Annual Hours	45 hours
Theory Hours	15 hours
Practical Hours	30 hours
Weekly Hours	3 hours (1 theory + 2 practical)

2. General Course Objective

This course aims to provide first-year students with foundational knowledge and practical skills in computer science. It covers essential topics such as computer fundamentals, hardware and software components, operating systems, Microsoft Office applications,

internet basics, and computer safety. The course is designed to enhance students' digital literacy and prepare them for academic and professional environments.

3. Learning Outcomes

By the end of the course, students will be able to:

1. Define basic computer concepts, generations, components, and types.
2. Distinguish between hardware and software and explain their functions.
3. Understand operating systems and perform basic file management tasks.
4. Use Microsoft Word for document creation, formatting, and editing.
5. Create and deliver presentations using Microsoft PowerPoint.
6. Perform basic data entry, calculations, and chart creation in Microsoft Excel.
7. Understand internet fundamentals and online communication tools.
8. Apply basic computer safety practices and recognize software licensing types.

4. Detailed Course Syllabus

Lecture No.	Chapter / Title	Topics Covered
01-02	Welcome & Introduction	Course overview, expectations, and materials.
03-04	Chapter 1: Computer Fundamentals	What is a Computer, Generations, Data vs. Information, Features, Components, Types of Computers.
05-07	Chapter 2: Computer Components	Computer Parts, Hardware, Ports, Number Systems, Software, Programming Languages, Personal Computers (PC).
08-13	Chapter 3: Operating Systems	OS Definition, Functions, Goals, Classification, Types (Windows), Control Panel, File & Folder Management.
14	Chapter 4: Microsoft Word	Interface Overview, Basic Operations, Formatting, Editing, Layout, Tables, Images.
	Mid-Term Exam	
15-20	Chapter 5: Microsoft PowerPoint	Interface Overview, Basic Operations, Formatting, Graphics, Charts, Preparing Scientific Presentations.
21-25	Chapter 6: Microsoft Excel	Interface Overview, Basic Operations, Functions, Formatting, Graphics, Charts.
26	Chapter 7: Computer Safety & Licenses	Safe Computing Practices, Types of Software Licenses.
27-29	The Internet &	Internet Basics, Web Browsing, Email, Online Tools.

	Communication	
30	Review & Final Preparation	Comprehensive review of all topics.

5. Teaching Methods

- Interactive theoretical lectures.
- Hands-on practical lab sessions.
- Group discussions and collaborative projects.
- Demonstrations and guided practice.
- Quizzes and in-class exercises.

6. Assessment Methods

- Mid-Term Exam: 30%
- Final Exam: 40%
- Practical Assignments & Lab Work: 20%
- Quizzes & Participation: 10%

7. Required Textbooks & Resources

1. Introduction to Computers, Peter Norton.
2. Microsoft Office 365 & Office 2019: Introductory, Misty E. Vermaat.
3. Operating System Concepts, Silberschatz, Galvin, Gagne.
4. Online tutorials and lab manuals provided by the instructor.

8. Attendance & Academic Policies

- Attendance is mandatory according to university regulations.
- Excessive unexcused absences may result in exclusion from the final exam.
- Academic integrity and respectful behavior are expected.
- Continuous assessment is used to support the learning process.

9. Weekly Schedule (Example)

Week	Theory (1 hr.)	Practical (2 hrs)
1	Course Introduction	Lab Orientation
2	Computer Fundamentals	Hardware Identification
3	Computer Components	Software Installation Basics
4	Operating Systems	Windows File Management
5	MS Word Basics	Document Creation & Formatting
6	**Mid-Term Exam**	Practical Assignment
7	MS PowerPoint Basics	Creating Presentations
8	Advanced PowerPoint	Designing Scientific Slides
9	MS Excel Basics	Data Entry & Simple Formulas
10	Excel Functions & Charts	Data Visualization
11	Computer Safety	Lab: License Recognition
12	Internet Basics	Web Browsing & Email
13	Online Communication Tools	Collaborative Tools Practice
14	Review Session	Final Project Work
15	**Final Exam**	

- **Subject: Computer Science**
- **Stage: 1st & 2nd**

1. Curriculum Narrative

Today, it's impossible to imagine life without computers or other digital devices. Nowadays, knowing how to use a computer is a need. Many of our students take advantage of our college's fundamental computer courses, which educate them on the principles of computers and the Internet's underlying technologies and skills. The course introduces students to the fundamentals of computing, including the use of a variety of different hardware and software components. There is no prerequisite knowledge in either programming or computer science.

2. Course Objectives

Students successfully completing this course will be able to:

1. **Utilize** the computer for fundamental tasks.
2. **Identify and discuss** the hardware components of the computer system.
3. **Create** documents using a word processor and creating presentations.
4. **Conduct** research on the Internet.
5. **Understand** the basic principles and applications of Artificial Intelligence.

3. Teaching & Learning Methods

- **Board:** Normal or Smart Board.
- **Computers:** Practical laboratory hands-on training.
- **Presentation Software:** Such as Microsoft PowerPoint.

4. Grading Policy

- **Passing Grade:** Passing the class requires a **50% average**.

5. Course Syllabus

Level I: Course Syllabus

Module No.	Module Title & Content	Theoretical Hours	Practical Hours
1	**Introduction to Computer:** Concepts of Hardware and Software with their components; Concept of Computing, Data and Information; Applications of Information Electronics and Communication Technology (IECT); Connecting Input/output devices, and peripherals to CPU.	2	2
2	**Computer Components:** Computer Portions; Hardware Parts; I/O Units; Memory Types; Basic CPU Components; Computer Ports; Personal	4	4

	Computer, Personal Computer (Features and Types).		
3	**Operating System and Graphical User Interface (GUI):** Operating System; Basics of Common Operating Systems; The User Interface; Using Mouse Techniques; Use of Common Icons; Status Bar; Using Menu and Menu-selection; Concept of Folders and Directories; Opening and closing of different Windows; Creating Shortcuts.	4	4
4	**Word Processing:** Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, language setting and thesaurus; Printing of word document.	4	4
5	**Spread Sheet:** Basics of Spreadsheet; Manipulation of cells; Formulas and Functions; Editing of Spread Sheet; printing of Spread Sheet.	4	4
6	**Presentation Software:** Basics of presentation software; Creating Presentation; Preparation and Presentation of Slides; Slide Show; Taking printouts of presentation / handouts.	4	4
7	**Introduction to Internet and Web Browsers:** Computer networks Basic; LAN, WAN; Concept of Internet and its Applications; connecting to internet; World Wide Web; Web Browsing software's; Search Engines; Understanding URL; Domain name; IP Address.	2	2
8	**Communications and Emails:** Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration.	2	2
9	**Computer Troubleshooting:** Identifying and solving common hardware and software problems that computer users encounter. Basic troubleshooting techniques and tools for diagnosing and resolving issues.	2	2

Total	**Level I Total Hours**	**28**	**28**

Level II: Course Syllabus

Module No.	Module Title & Content	Theoretical Hours	Practical Hours
1	**Security and Networking:** What is a network?; Types of networks; Basic network components; Network Security Basics; Understanding network threats; Network Troubleshooting.	2	2
2	**E-Commerce:** Concepts of Electronic banking services this include online banking: ATM and debit card services, Phone banking, SMS banking, electronic alert, Mobile banking.	2	2
3	**Computer Troubleshooting:** Identifying and solving common hardware and software problems that computer users encounter. Basic troubleshooting techniques and tools for diagnosing and resolving issues.	4	4
4	**Introduction to AI:** Definition of AI, History of AI, AI Techniques and Approaches, Challenges and Ethical Considerations.	4	4
5	**AI in Our Daily Lives:** AI in smartphones and virtual assistants like Siri or Google Assistant.	4	4
6	**Applications of AI:** Education, Healthcare, Finance, Transportation, Marketing and Advertising.	6	6
7	**AI and Society:** How AI affects social, AI and international relations, AI and the future of humanity.	2	2
8	**Ethical Challenges in AI:** AI ethics, privacy and surveillance, the impact of AI on the job market.	2	2

9	**The Future of AI:** Future trends in AI, recent research and emerging technologies.	2	2
Total	**Level II Total Hours**	**28**	**28**

6. المصادر الموصى بها والمراجع (Suggested Books & References)

1. **Graham Brown, David Watson**, *"Cambridge IGCSE Information and Communication Technology"*, 3rd Edition (2020).
2. **Alan Evans, Kendall Martin, Mary Anne Poatsy**, *"Technology In Action Complete"*, 16th Edition (2020).
3. **Ahmed Banafa**, *"Introduction to Artificial Intelligence (AI)"*, 1st Edition (2024).
4. **الخضر علي الخضر بحاث**، *"أساسيات الحاسوب"*(2016).
5. **الدكتور عادل عبد النور**، *"مدخل إلى عالم الذكاء الاصطناعي"*(2005).

وصف مقرر مادة اللغة العربية لغير الاختصاص – المرحلة الأولى

يأتي هذا الوصف لمقرر اللغة العربية لغير الاختصاص ضمن المنهاج الموحد المعتمد في الجامعات العراقية والأهلية، ويُدرَّس لطلبة المرحلة الأولى في كلية الطب، بهدف تزويد الطلبة بأساس لغوي ومعرفي متين، يسهم في تنمية قدراتهم على فهم النصوص العربية، ولا سيما النص القرآني والأدبي، وتعزيز مهاراتهم اللغوية بما يخدم مسيرتهم الأكاديمية وتخصصهم العلمي.

وقد روعي في إعداد هذا الوصف الالتزام بمفردات المنهاج الموحد الصادر عن وزارة التعليم العالي والبحث العلمي، مع اعتماد التدرج المعرفي والتكامل بين محاور المادة، وتوزيع المفردات وفق الخطة الزمنية المعتمدة بواقع 30 ساعة سنويًا، وبما ينسجم مع متطلبات الجودة والاعتماد الأكاديمي.

أولاً: البيانات العامة للمقرر

البند	التفاصيل
اسم المقرر	اللغة العربية لغير الاختصاص
المرحلة	الأولى
نوع المحاضرة	نظري
عدد الوحدات	وحدتان

عدد الساعات السنوية	ساعة 30
عدد الساعات الفصلية	ساعة 15
عدد الساعات الأسبوعية	1ساعة

ثانياً: الهدف العام للمقرر

يهدف مقرر اللغة العربية لغير الاختصاص إلى تزويد طلبة المرحلة الأولى بأساس لغوي متين، وتنمية قدراتهم على فهم النصوص العربية، ولا سيما النص القرآني والأدبي، وتعزيز مهاراتهم في القراءة والتحليل والتعبير السليم، بما ينسجم مع متطلبات الدراسة الجامعية ويخدم تخصصهم العلمي.

ثالثاً: أهداف المقرر التعليمية

1. تعزيز وعي الطلبة بأهمية اللغة العربية ومكانتها الثقافية والعلمية.
2. تمكين الطلبة من فهم النصوص القرآنية والحديثية فهماً لغوياً مبسطاً.
3. تعريف الطلبة بنماذج مختارة من الأدب العربي وقيمه الإنسانية.
4. إكساب الطلبة معرفة أساسية في الصرف والنحو العربي.
5. تنمية المهارات اللغوية الكتابية والإملائية.
6. تعريف الطلبة بأساسيات البلاغة العربية وتطبيقاتها.
7. تدريب الطلبة على استخدام المعاجم العربية.

بنهاية المقرر يكون الطالب قادرًا على:

1. قراءة النصوص العربية قراءة صحيحة وفهم معانيها العامة.
2. تفسير المفردات الغربية بالاعتماد على السياق والمعجم.
3. التمييز بين أقسام الكلام وصيغ الأفعال الأساسية.
4. تطبيق القواعد الصرفية والنحوية البسيطة.
5. التعرف على الصور البلاغية الأساسية في النصوص.
6. كتابة نصوص قصيرة خالية من الأخطاء الشائعة.
7. إظهار مستوى لغوي مناسب للدراسة الجامعية.

المنهاج الموحد لمادة (اللغة العربية لغير الاختصاص) في الجامعات العراقية والأهلية

المرحلة الأولى

الفصل الأول

المفردات	المحور
.1سورة البقرة من الآية (260 – 263) .2الحديث النبوي الشريف: "إنما بعثت لأتمم مكارم الأخلاق."	أولاً: القرآن والحديث النبوي الشريف
.1الاختيارات الشعرية في العصر الجاهلي (المعلقات اختياراً) .2قصيدة عنترة بن شداد (يا عبل ابن من المنية مهربي.)..	ثانياً: الأدب العربي
.1الميزان الصرفي. .2الجموع في العربية. .3إسناد الفعل إلى الضمائر. .4تصريف الأفعال (الصحة والاعتلال – التجرد والزيادة) .5المشتقات.	ثالثاً: علم الصرف
.1الحروف الهجائية (الشمسية والقمرية) .2أحكام كتابة علامات الترقيم. .3أحكام كتابة الهمزة (الأولى - المتوسطة - المتطرفة) + (همزتا الوصل والقطع)	رابعاً: مهارات لغوية
.1المدارس المعجمية. .2معاني اللفاظ الغريبة في القرآن (كلفظة: تفهم، فرشا، نقرا) بالاعتماد على كتاب "المفردات" للراغب الأصفهاني. .3منهج مدرستي (العين) و(الأساس)، والتمرين على استخراج اللفاظ.	خامساً: المعاجم العربية

الفصل الثاني

المفردات	المحور
.1سورة الحج من الآية (1-5) .2الحديث النبوي الشريف: "خيركم من تعلم القرآن وعلمه."	**أولاً: القرآن الكريم والحديث النبوي الشريف**
.1سبعة أبيات من بائية ابن الرومي (صديقك من عدوك مستفاد.). .2القيم الإنسانية في الشعر الجاهلي. .3موقف الإسلام من الشعر.	**ثانياً: الأدب العربي**
.1أقسام الكلام وعلامات الإعراب. .2المعرب والمبني - النكرة والمعرفة. .3المبتدأ والخبر. .4النواسخ. .5الفاعل ونائب الفاعل.	**ثالثاً: النحو العربي**
.1مقدمة عامة في البلاغة العربية. .2تعريف البلاغة لغة واصطلاحاً. .3مدخل في تعريف علم البلاغة وعلاقتها باللغة العربية. .4علم البيان: تعريفه وأنواعه. .5التشبيه: تعريفه وأنواعه وتطبيقاته. .6الحقيقة والمجاز.	**رابعاً: البلاغة العربية**

.7المجاز اللغوي: تعريفاته وعلاقاته وتطبيقاته. .8الاستعارة: تعريفاتها وعلاقاتها وتطبيقاتها. .9المجاز العقلي: تعريفاته وعلاقاته وتطبيقاته. .10الكناية: تعريفاتها وعلاقاتها وتطبيقاتها. .11من الأخطاء اللغوية الشائعة.	

الخطة الزمنية للمقرر (30 ساعة)

الفصل الأول (15 ساعة)

محتوى المحاضرة	المحور	الأسبوع
-سورة البقرة (260-263) معاني الآية وشرحها. -الحديث النبوي: «إنما بُعثت لأتمم مكارم الأخلاق.«	القرآن الكريم والحديث النبوي الشريف	**1**
-سورة الحج (1-5) معاني الآيات وشرحها. -الحديث النبوي: «خيركم من تعلم القرآن وعلمه.«	القرآن الكريم والحديث النبوي الشريف	**2**
-مقدمة عن العصر الجاهلي والشعر - المعلقات اختياراً.	الأدب العربي	**3**
-قصيدة عنترة بن شداد - تحليل أبيات مختارة.	الأدب العربي	**4**
-القيم الإنسانية في الشعر الجاهلي.	الأدب العربي	**5**
-مقدمة عن عصر صدر الإسلام -موقف الإسلام من الشعر والشعراء.	الأدب العربي	**6**
-مقدمة عن عصر بني أمية - النقائض -مقدمة عن العصر العباسي - الشاعر ابن الرومي.	الأدب العربي	**7**
-تحليل سبعة أبيات من قصيدة ابن الرومي (عدوك من صديقك مستفاد.(	الأدب العربي	**8**
-الميزان الصرفي -الجموع في العربية.	علم الصرف	**9**
-إسناد الفعل إلى الضمائر + تصريف الأفعال.	علم الصرف	**10**
-تصريف الأفعال من حيث التجرد والزيادة -الصحة والاعتلال.	علم الصرف	**11**
-تصريف الأفعال من حيث التصرف والجمود -تصريف الأفعال من حيث اللزوم والتعدي.	علم الصرف	**12**
-المشتقات -مراجعة عامة وتمارين تطبيقية.	علم الصرف	**13**
-الحروف الهجائية (الشمسية والقمرية) + علامات الترقيم.	المهارات اللغوية	**14**

-أحكام كتابة الهمزة (الأولية والمتوسطة والمتطرفة(-همزتا الوصل والقطع.	المهارات اللغوية	**15**

الفصل الثاني (15 ساعة)

محتوى المحاضرة	المحور	الأسبوع
-المدارس المعجمية وأهمية المعاجم.	المعاجم العربية	**16**
-استخراج معاني الألفاظ الغريبة في القرآن (تفهم – فرشًا – نقيزًا)	المعاجم العربية	**17**
-منهج مدرستي العين والأساس + تدريب على استخراج الألفاظ.	المعاجم العربية	**18**
-أقسام الكلام وعلامات الإعراب.	النحو العربي	**19**
-المعرب والمبني.	النحو العربي	**20**
-النكرة والمعرفة.	النحو العربي	**21**
-المبتدأ والخبر.	النحو العربي	**22**
-النواسخ.	النحو العربي	**23**
-الفاعل ونائب الفاعل + تطبيقات وتمارين.	النحو العربي	**24**
-مقدمة عامة في البلاغة + تعريفها لغة واصطلاحاً.	البلاغة العربية	**25**
-علم البيان: تعريفه وأنواعه.	البلاغة العربية	**26**
-التشبيه وتعريفه وأنواعه.	البلاغة العربية	**27**
-الحقيقة والمجاز + المجاز اللغوي وتطبيقاته.	البلاغة العربية	**28**
-الاستعارة + المجاز العقلي وتطبيقاته.	البلاغة العربية	**29**
-الكناية + الأخطاء اللغوية الشائعة.	البلاغة العربية	**30**

ملاحظة :روعي في توزيع المفردات داخل الخطة الزمنية مبدأ التدرج المعرفي والتكامل بين محاور المادة، مع الالتزام التام بمفردات المنهاج الموحد، وقد يُقدَّم أو يُؤخَّر بعض الموضوعات بما يخدم التسلسل التعليمي وتحقيق أهداف المقرر.

سادسًا: طرائق التدريس

- المحاضرة التفاعلية.
- المناقشة الصفية.
- تحليل النصوص القرآنية والأدبية.
- التمارين التطبيقية.
- التعلم القائم على المشاركة.

سابعًا: أساليب التقويم

- الامتحان النصفي.

- الامتحان النهائي.
- الاختبارات القصيرة.
- الواجبات والأنشطة الصفية.
- الحضور والمشاركة.

ثامناً: المصادر والمراجع

1. القرآن الكريم.
2. الراغب الأصفهاني، مفردات ألفاظ القرآن.
3. ابن هشام، شذور الذهب.
4. أحمد الهاشمي، جواهر البلاغة.
5. ابن منظور، لسان العرب.
6. المعجم الوسيط.
7. شوقي ضيف، العصر الجاهلي.

تاسعاً: سياسة الحضور والتقويم

- يلتزم الطلبة بالحضور وفق تعليمات وزارة التعليم العالي.
- الغياب المتكرر دون عذر مشروع يؤدي إلى الحرمان.
- يراعى الانضباط الأكاديمي والسلوك الجامعي.
- يعتمد التقويم المستمر دعماً لعملية التعلم.

عاشراً: ملخص بيانات المقرر

البند	التفاصيل
المادة	اللغة العربية
المرحلة	الأولى
نوع المحاضرات	نظري
عدد الوحدات	2
الساعات السنوية	(30)ساعة
الساعات الفصلية	(15)ساعة
الساعات الأسبوعية	(1)ساعة

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وصف مقرر مادة حقوق الإنسان والديمقراطية – المرحلة (الاولى)

يأتي هذا الوصف لمقرر حقوق الإنسان والديمقراطية ضمن المنهاج المعتمد في الجامعات العراقية، بهدف تزويد الطلبة بفهم نظري رصين لمبادئ حقوق الإنسان ومفهوم الديمقراطية وأسسهما ونشأتهما التاريخية وأهميتهما المعاصرة، بما يعزز وعيهم القانوني والمواطني ويسهم في بناء شخصيتهم الأكاديمية والمجتمعية.

وقد روعي في إعداد هذا الوصف الالتزام بمعايير الجودة الأكاديمية، مع اعتماد التدرج المنطقي والترابط بين المحاور، وتوزيع المفردات وفق الخطة الزمنية المعتمدة، وبما ينسجم مع متطلبات الجودة والاعتماد الأكاديمي.

أولاً: البيانات العامة للمقرر

البند	التفاصيل
اسم المقرر (باللغة العربية)	حقوق الإنسان والديمقراطية
اسم المقرر (باللغة الانجليزية)	Human Rights & Democracy
نوع المادة	نظرية
عدد الوحدات	2
عدد الساعات الأسبوعية	2ساعة (نظري)
عدد الساعات الفصلية	30ساعة
عدد الساعات السنوية	30ساعة

ثانياً: الهدف العام للمقرر

يهدف المقرر إلى إكساب الطلبة معرفة منهجية بأساسيات وقيم حقوق الإنسان والديمقراطية، من خلال تتبع جذورهما التاريخية والفلسفية، وتحليل أطرهما القانونية والمعاصرة، وتعزيز قدرتهم على النقد والتحليل فيما يتعلق بقضايا الحرية والعدالة والحكم الرشيد.

ثالثاً: أهداف المقرر التعليمية

1. تعريف الطلبة بالمفاهيم الأساسية لحقوق الإنسان والديمقراطية وخصائصهما.
2. تتبع التطور التاريخي لفكرة الحقوق من الحضارات القديمة إلى الشرائع السماوية والمواثيق الدولية.
3. تحليل الإطار القانوني والدستوري لضمانات حقوق الإنسان على المستويين الوطني والدولي.
4. فهم أنواع الحقوق وتصنيفاتها (الفردية/الجماعية، الأساسية/غير الأساسية.(
5. دراسة مفهوم الديمقراطية، أركانها، صورها (مباشرة، شبه مباشرة، نيابية)، وآليات عملها.

6. تحليل خصائص وضمانات النظم الديمقراطية وآليات إسناد السلطة فيها (الانتخابات).
7. مناقشة إيجابيات وسلبيات النظام الديمقراطي وقدرته على تحقيق أهدافه.

رابعاً: مخرجات التعلم

بنهاية المقرر يكون الطالب قادرًا على:

1. تحديد وشرح المفاهيم الأساسية المتعلقة بحقوق الإنسان والديمقراطية.
2. تحليل الجذور التاريخية والفلسفية لحقوق الإنسان في مختلف الحضارات والشرائع.
3. تفسير نصوص الإعلان العالمي لحقوق الإنسان وتقييم قيمته القانونية.
4. التمييز بين أنواع الحقوق المختلفة وضماناتها الدستورية والقضائية.
5. مقارنة بين صور الديمقراطية المختلفة وآليات عمل كل منها.
6. نقد آليات الانتخاب وضمانات نزاهته في النظام الديمقراطي.
7. مناقشة موضوعية لمحاسن ومساوئ النظام الديمقراطي.

خامساً: مفردات المنهاج التفصيلية

المحور الأول: حقوق الإنسان (أسابيع 1-7)

الموضوع	الأسبوع
مفهوم حقوق الإنسان :التعريف الفقهي والقانوني، خصائص حقوق الإنسان.	**1**
حقوق الإنسان في الشرائع السماوية :الشريعة اليهودية والمسيحية، حقوق الإنسان في الشريعة الإسلامية.	**2**
حقوق الإنسان في الحضارات القديمة :الحضارة اليونانية والرومانية، حضارة وادي النيل وحضارة وادي الرافدين.	**3**
أنواع حقوق الإنسان :الحقوق الأساسية وغير الأساسية، الحقوق الفردية والحقوق الجماعية.	**4**
الإعلان العالمي لحقوق الإنسان :تعريفه، مضمونه، قيمته القانونية، أهدافه، وأهميته.	**5**
الضمانات التشريعية لحقوق الإنسان :الضمانات في التشريعات العراقية، تقسيم الحقوق والحريات.	**6**
الضمانات الدستورية والقضائية :الضمانات الدستورية (الدستور، سيادة القانون، فصل السلطات). الضمانات القضائية (حق التقاضي، الرقابة على دستورية القوانين، الرقابة على أعمال السلطة التنفيذية)	**7**

المحور الثاني: الديمقراطية (أسابيع 8-15)

الموضوع	الأسبوع
مفهوم الديمقراطية :تعريفها، الديمقراطية القديمة (أثينا)، الديمقراطية الحديثة.	**8**
أركان وصور الديمقراطية :أركان الديمقراطية. صور الديمقراطية (المباشرة، شبه المباشرة، النيابية.(	**9**
خصائص وأهداف الديمقراطية :خصائص النظام الديمقراطي، الأهداف التي تسعى الديمقراطية لتحقيقها.	**10**

طرق نشوء الديمقراطية :الطريق السلمي، طريقة الفرض، طريقة الثورة.	**11**
خصائص النظام الديمقراطي :وجود الدستور، سيادة القانون، حرية التعبير، حرية تكوين الأحزاب، استقلال القضاء.	**12**
آليات إسناد السلطة (الانتخابات :(مفهوم الانتخاب، أساليبه (مباشر/غير مباشر، فردي/بقائمة)، ضمانات نزاهة الانتخاب (السرية، المساواة، عدم الإكراه.(	**13**
محاسن وأهداف الديمقراطية :الإيجابيات التي يتمتع بها النظام الديمقراطي، والأهداف التي يحققها.	**14**
مساوئ الديمقراطية ومراجعة عامة :نقد النظام الديمقراطي، وإعادة سريعة لأهم محاور حقوق الإنسان.	**15**

سادساً: الخطة الزمنية للمقرر (15 أسبوعاً / 30 ساعة)

الساعات	الموضوع التفصيلي	المحور الرئيسي	الأسبوع
2	مفهوم حقوق الإنسان. التعريف الفقهي والقانوني. الخصائص.	**حقوق الإنسان**	**1**
2	الحقوق في الشرائع السماوية (اليهودية، المسيحية، الإسلامية)	**حقوق الإنسان**	**2**
2	الحقوق في الحضارات القديمة (اليونان، روما، وادي النيل، وادي الرافدين)	**حقوق الإنسان**	**3**
2	أنواع الحقوق (أساسية/غير أساسية، فردية/جماعية)	**حقوق الإنسان**	**4**
2	الإعلان العالمي لحقوق الإنسان: التعريف، المضمون، القيمة، الأهداف، الأهمية.	**حقوق الإنسان**	**5**
2	الضمانات التشريعية في العراق. تقسيم الحقوق والحريات.	**حقوق الإنسان**	**6**
2	الضمانات الدستورية والقضائية (الدستور، سيادة القانون، فصل السلطات، الرقابة القضائية).	**حقوق الإنسان**	**7**
2	مفهوم الديمقراطية: التعريف، النشأة (أثينا، العصر الحديث)	**الديمقراطية**	**8**
2	أركان الديمقراطية. صور الديمقراطية (مباشرة، شبه مباشرة، نيابية.(	**الديمقراطية**	**9**
2	خصائص النظام الديمقراطي. أهداف الديمقراطية.	**الديمقراطية**	**10**
2	طرق نشوء الديمقراطية (سلمي، فرض، ثورة)	**الديمقراطية**	**11**
2	خصائص النظام الديمقراطي (الدستور، سيادة القانون، حريات، أحزاب، قضاء مستقل)	**الديمقراطية**	**12**
2	آليات إسناد السلطة: الانتخابات (مفهوم، أساليب، ضمانات النزاهة.(	**الديمقراطية**	**13**
2	محاسن النظام الديمقراطي. أهداف الديمقراطية.	**الديمقراطية**	**14**
2	مساوئ الديمقراطية. مراجعة عامة لأهم مفاهيم حقوق الإنسان.	**الديمقراطية**	**15**

سابعاً: طرائق التدريس

- المحاضرة النظرية التشاركية.
- العصف الذهني والمناقشة الجماعية.
- تحليل النصوص القانونية والتاريخية.

- دراسة الحالات (Case Studies) المتعلقة بتطبيقات حقوق الإنسان.
- العروض التقديمية من قبل الطلبة

ثامناً: أساليب التقويم

- **الامتحان النصفي** – (30%) **:**يغطي محاور حقوق الإنسان (الأسابيع 1-7)
- **الامتحان النهائي** – (40%) **:**يغطي المحورين مع التركيز على الديمقراطية.
- **التقويم المستمر** – (30%) **:**يشمل:
  - المشاركة الفعالة في المناقشات الصفية.
  - الواجبات والبحوث القصيرة.
  - الاختبارات القصيرة.(Quizzes)
  - العروض التقديمية.

تاسعاً: المصادر والمراجع الرئيسية

1. الإعلان العالمي لحقوق الإنسان (1948)
2. الدستور العراقي النافذ.
3. عبد الكريم علوان، "حقوق الإنسان بين الشريعة والقانون الدولي."
4. محمد عابد الجابري، "الديمقراطية وحقوق الإنسان."
5. فرانسيس فوكوياما، "نهاية التاريخ والإنسان الأخير" (فصول مختارة)
6. مجموعة من المؤلفين، "مدخل إلى علم السياسة."
7. تقارير المنظمات الدولية (مثل منظمة العفو الدولية، هيومان رايتس ووتش)

عاشراً: سياسة الحضور والتقويم

- الحضور إلزامي وفقاً للتعليمات الجامعية النافذة.
- يحرم الطالب من التقدم للامتحان النهائي في حالة تجاوز نسبة الغياب المسموح بها دون عذر مشروع.
- يُشجع على الانضباط الأكاديمي والمشاركة البناءة.
- يعتمد نظام التقييم المستمر لقياس تطور أداء الطالب طوال الفصل.

Educational program description

Second Year

Subject: Human Anatomy

2nd Year

1. General Course Information

Item	Details
Subject Name	Human Anatomy
Year	First Year (Medical)
Lecture Type	Theory & Practical
Number of Units	10
Total Annual Hours	180 hours
Theory Hours	120 hours
Practical Hours	60 hours
Weekly Hours	12 hours (8 theory + 4 practical)

2. General Course Objective

This course provides first-year medical students with a comprehensive understanding of human anatomy, focusing on the structural organization of the human body. Emphasis is placed on neuroanatomy, head and neck, abdomen, pelvis, and perineum regions. The course integrates theoretical knowledge with practical dissection and imaging studies to prepare students for clinical application.

3. Learning Outcomes

By the end of the course, students will be able to:

1. Describe the anatomical structures of the nervous system, including CNS, PNS, and ANS.
2. Identify bones, muscles, vessels, and nerves of the skull and neck.
3. Understand the organization of the brain, brainstem, cerebellum, and spinal cord.
4. Recognize the anatomical features of the face, oral cavity, nasal cavity, and larynx.
5. Describe the structures of the abdomen, including the gastrointestinal tract and associated organs.
6. Explain the anatomy of the pelvis and perineum in both sexes.
7. Apply anatomical knowledge to clinical scenarios and surgical landmarks.
8. Use anatomical terminology accurately in describing human structures.

4. Detailed Course Syllabus

No.	Chapter / Title	Topics Covered
1	Neuroanatomy: Introduction	Nervous tissue, CNS, PNS, ANS, Neuroglial cells, anatomical terms.
2	Skull: Osteology	Views of the skull, bony landmarks, foramina.
3	Meninges	Dura mater, arachnoid, pia mater, dural folds, cranial venous sinuses.
4	Divisions of the Brain	Overview of brain regions and functional areas.
5	Cerebral Hemispheres	External and internal structures, lobes, sulci, gyri.
6	Basal Ganglia	Components, connections, and functions.
7	Ventricles of the Brain	Lateral, third, fourth ventricles, choroid plexus.
8	Brainstem: Midbrain	External and internal structures, cerebral peduncles, tectum.
9	Diencephalon	Thalamus, hypothalamus, epithalamus, subthalamus.
10	Pons	External features, internal structure, cranial nerve nuclei.
11	Cerebellum	Lobes, peduncles, deep nuclei, functional organization.
12	Blood Supply of the Brain	Arterial circle of Willis, venous drainage.
13	Cerebrospinal Fluid	Production, circulation, absorption, clinical relevance.
14	Spinal Cord	External and internal features, meninges, spinal nerves.
15	Tractology of the Spinal Cord	Ascending and descending tracts, functions.
16	Pyramidal & Extrapyramidal Systems	Motor pathways, clinical correlations.
17	Cranial Nerves	Origin, course, branches, functions (I–XII).
18	Scalp	Layers, muscles, blood vessels, nerves.
19	Head & Neck: Temporal & Infratemporal Fossa	Boundaries, contents, muscles, nerves, vessels.
20	Neck: Surface Anatomy & Superficial Fascia	Landmarks, platysma, cutaneous nerves.
21	Posterior Triangle of the Neck	Boundaries, muscles, vessels, nerves.
22	Anterior Triangle of the Neck & Thyroid Gland	Subdivisions, muscles, vessels, nerves, thyroid anatomy.
23	Main Vessels, Arteries, Nerves & Cervical Plexus	Carotid sheath, cervical sympathetic chain, brachial plexus roots.
24	Face & Muscles of Mastication	Facial muscles, innervation, blood supply, muscles of mastication.

25	Parotid Gland	Location, relations, duct, innervation.
26	Submandibular Region	Submandibular gland, muscles, nerves, vessels.
27	Oral Cavity	Boundaries, tongue, palate, teeth, salivary glands.
28	Nasal Cavity & Paranasal Sinuses	Walls, meatuses, sinus drainage, innervation.
29	Larynx	Cartilages, muscles, innervation, vocal folds.
30	Ear & Related Structures	External, middle, and inner ear anatomy.
31	Abdomen: Anterior & Posterior Abdominal Wall	Muscles, fasciae, neurovascular supply.
32	Inguinal Canal & Hernia	Walls, contents, spermatic cord, types of hernia.
33	Peritoneum & Abdominal Viscera Arrangement	Mesenteries, omenta, peritoneal spaces.
34	Gastrointestinal Tract: Esophagus	Course, constrictions, blood supply, innervation.
35	Stomach	Parts, relations, blood supply, innervation.
36	Small & Large Intestine	Duodenum, jejunum, ileum, colon, blood supply, lymphatics.
37	Liver & Biliary System	Lobes, ligaments, bile ducts, gallbladder.
38	Spleen	Location, relations, blood supply, functions.
39	Pancreas	Parts, ducts, blood supply, relations.
40	Retroperitoneal Structures: Kidney & Suprarenal Gland	Location, coverings, blood supply, adrenal anatomy.
41	Lumbar Plexus	Formation, branches, distribution.
42	Pelvis: Bony Pelvis & Pelvic Skeleton	Pelvic girdle, differences between male and female.
43	Pelvic Diaphragm & Visceral Pelvic Fascia	Muscles, fascial layers, pelvic floor.
44	Pelvic Viscera: Male	Prostate, seminal vesicles, bladder, rectum.
45	Pelvic Viscera: Female	Uterus, ovaries, uterine tubes, vagina, rectum.
46	Perineum & Urogenital Diaphragm	Boundaries, muscles, genital triangle contents.
47	Anal Triangle & Anal Canal	Ischiorectal fossa, anal sphincters, blood supply.
48	Ischiorectal Fossa	Boundaries, contents, clinical significance.
49	Clinical Notes	Integration of anatomy with clinical cases and surgical relevance.

5. Teaching Methods

- Didactic lectures with visual aids (diagrams, models, radiographs).
- Cadaver dissection and prosection demonstrations.
- Small group tutorials and interactive sessions.
- Use of anatomical atlases and digital resources (3D anatomy software).
- Clinical correlation lectures with case-based learning.

6. Assessment Methods

- **Theory Exams (Midterm & Final):** 60%
- **Practical / Spot Exams:** 30%
- **Assignments & Participation:** 10%

7. Required Textbooks & Resources

1. *Gray's Anatomy for Students*, Drake, Vogl, Mitchell.
2. *Netter's Atlas of Human Anatomy*, Frank H. Netter.
3. Access to online anatomy platforms (e.g., Complete Anatomy, Anatomy.tv).

8. Attendance & Academic Policies

- Attendance is mandatory for both theory and practical sessions.
- Minimum attendance of 80% is required to be eligible for final examinations.
- Professional behavior and respect for cadaveric material are strictly enforced.
- Academic integrity is expected in all assessments.

9. Sample Weekly Schedule (Theory Focus)

Week	Theory Topics (8 hrs)	Practical / Lab (4 hrs)
1	Neuroanatomy Introduction	Nervous tissue models
2	Skull Osteology	Skull bone identification
3	Meninges & Venous Sinuses	Dural folds & sinuses demonstration
4–6	Brain & Brainstem	Brain dissection & sections
7–8	Spinal Cord & Tracts	Spinal cord models & sections
9–10	Cranial Nerves & Head/Neck	Cadaveric head & neck dissection

11–12	Face, Oral & Nasal Cavities	Prosections of facial structures
13–15	Abdomen & GI Tract	Abdominal wall & viscera dissection
16–18	Pelvis & Perineum	Pelvic models & cadaveric demonstration
19	Review & Integration	Clinical case discussions
20	**Final Examinations**	**Practical Spot Exams**

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Subject: Biochemistry/ 2nd Year

First Semester

Week	Lecture Hours	Topic	Type	Assessment Type
1st	3	First Semester Exams	Theoretical	Periodic/Final/CW
2nd	3	Metabolism of amino acids and proteins and their disorders – Classification and functions of amino acids. General properties of proteins.	Theoretical	Periodic/Final/CW
3rd	3	Catabolism of amino acids. Urea cycle and detoxification of ammonia. Breakdown of phenylalanine and tyrosine into acetoacetyl CoA.	Theoretical	Periodic/Final/CW
4th	3	Inborn errors of amino acid metabolism. Conversion of amino acids into specialized products, formation of chemical neurotransmitters.	Theoretical	Periodic/Final/CW
5th	3	Creatine and creatinine. Porphyrin metabolism and porphyrin disorders. Protein biosynthesis. Digestion and absorption of protein.	Theoretical	Periodic/Final/CW
6th	3	Vitamins and Coenzymes – The fat-soluble vitamins: Vitamin A and the role of vitamin A in the visual cycle. Vitamin D metabolism and biochemical function. Vitamin E and the antioxidant	Theoretical	Periodic/Final/CW

		theory. Vitamin K – mechanism of action in coagulation.		
7th	3	The water-soluble vitamins: Thiamin and biochemical functions. Riboflavin and biochemical functions. Niacin, functions and importance. Pyridoxine and biochemical functions. Pantothenic acid and coenzyme A. Biotin and biochemical functions. Folic acid, functions, metabolism and antagonism. Vitamin B12, mechanism of action and anemia. Ascorbic acid and biochemical functions.	Theoretical	Periodic/Final/CW

Practical - First Semester, Second Year

Week	Hours	Unit / Course or Topic Name	Teaching Method	Assessment Method
1st	2	Introduction: lab. Hazards & sample collection.	Practical	Periodic/Final/CW
2nd	2	Hemolysis of blood & pipetting techniques	Practical	Periodic/Final/CW
3rd	2	UV-visible spectroscopy	Practical	Periodic/Final/CW
4th	2	Quantitative determination of Serum glucose	Practical	Periodic/Final/CW
5th	2	Glucose tolerance test (GTT).	Practical	Periodic/Final/CW
6th	2	Quantitative determination of Serum cholesterol	Practical	Periodic/Final/CW
7th	2	Quantitative determination of HDL cholesterol	Practical	Periodic/Final/CW
8th	2	Quantitative determination of LDL cholesterol	Practical	Periodic/Final/CW
9th	2	First Semester Exams	Practical	Periodic/Final/CW
10th	2	Quantitative determination of Serum triglycerides	Practical	Periodic/Final/CW

11th	2	Quantitative determination of Serum urea	Practical	Periodic/Final/CW
12th	2	Quantitative determination of Creatinine	Practical	Periodic/Final/CW
13th	2	Determination of Serum albumin, globulins, & A/G ratio	Practical	Periodic/Final/CW
14th	2	Determination of Serum proteins electrophoresis	Practical	Periodic/Final/CW
15th	2	Practical exam	Practical	Periodic/Final/CW

Second Semester, Second Year

Week	Hours	Unit / Course or Topic Name	Teaching Method	Assessment Method
1st	3	Nucleic acids metabolism. Structures and general properties of nucleic acids. Metabolism of purine and pyrimidine nucleotides inside human body	Theoretical	Theoretical
2nd	3	Hyperuricemia and gout disease. DNA synthesis. Functions of human DNA.	Theoretical	Theoretical
3rd	3	Protein biosynthesis and the human genome. Biochemical mutations. Types of damage to DNA	Theoretical	Theoretical
4th	3	DNA analysis. Use of recombinant DNA techniques for diagnosis of disease. Use of recombinant DNA techniques for the prevention and treatment of disease	Theoretical	Theoretical
5th	3	Hormones Classification of hormones. Mechanisms of hormones action	Theoretical	Theoretical
6th	3	Hormones that regulate fuel metabolism. Hormones that regulate salt and water balance. Hormones that regulate calcium and phosphate metabolism	Theoretical	Theoretical
7th	3	Hormones that regulate the body size and metabolism. Hormones that regulate the male reproductive system. Hormones	Theoretical	Theoretical

		that regulate the female reproductive system.		
8th	3	Metabolism of minerals and trace elements Ca, Fe, Cu, Zn	Theoretical	Theoretical
9th	3	Special topics Cell membrane. Liver and kidney function test. Renal function	Theoretical	Theoretical
10th	3	Cancer and tumor markers. Clinical enzymology. Detoxification.	Theoretical	Theoretical
11th	3	Definition, initiators of protein synthesis	Theoretical	Theoretical
12th	3	Ribosomes and the mechanism of protein synthesis	Theoretical	Theoretical
13th	3	Differences between prokaryotic and eukaryotic translation process. Antibiotic action on translation Posttranslational modifications of protein	Theoretical	Theoretical
14th	3	Basic structure, components of nucleic acid, polarity, backbone, etc. General features of DNA double helix, viral nucleic acids & their Replication	Theoretical	Theoretical
15th	3	Different kinds of cellular RNAs Hybridization concept General features of genetic code Eukaryotic genes are interrupted genes Exon shuffling and alternative splicing of RNA and their importance	Theoretical	Theoretical
16th	3	DNA grooves and B, A, and Z-helical forms DNA topology: relaxed and supercoiled forms, DNA gyrase and topoisomerases DNA polymerases and their action Mechanism of DNA replication: synthesis of lagging and leading strands Mutation and mutagenesis: definition, types, causes, mechanism, Ames test Repair of DNA damage: Etiological factors Mechanism	Theoretical	Periodic/Final/CW

		of repair Xeroderma pigmentosa, molecular cause		

Practical - Second Semester, Second Year

Week	Hours	Unit / Course or Topic Name	Teaching Method	Assessment Method
1st	2	Determination of Serum Uric Acid.	Practical	Periodic/Final/CW
2nd	2	Determination of Serum Bilirubin direct	Practical	Periodic/Final/CW
3rd	2	Determination of Serum Bilirubin indirect	Practical	Periodic/Final/CW
4th	2	Determination of Serum AST	Practical	Periodic/Final/CW
5th	2	Determination of Serum ALT	Practical	Periodic/Final/CW
6th	2	Determination of Serum Alkaline Phosphatase	Practical	Periodic/Final/CW
7th	2	Practical exam	Practical	Periodic/Final/CW
8th	2	Determination of Serum Phosphorus	Practical	Periodic/Final/CW
9th	2	Determination of Serum Calcium	Practical	Periodic/Final/CW
10th	2	Determination of Serum Sodium	Practical	Periodic/Final/CW
11th	2	Determination of Serum potassium	Practical	Periodic/Final/CW
12th	2	Determination of Acid Phosphatase Activity	Practical	Periodic/Final/CW
13th	2	Determination of Serum Iron & Total Iron Binding Capacity	Practical	Periodic/Final/CW
14th	2	Hemoglobin electrophoresis.	Practical	Periodic/Final/CW
15th	2	Practical exam	Practical	Periodic/Final/CW

Subject: Human Histology- 2nd Year

Course Description

The staff teaches human anatomy, histology, embryology, and biology for the first and second academic Years through theoretical lectures and practical laboratory sessions.

- Among the course objectives are:
- Adherence to the university calendar for teaching theoretical and practical subjects to first and second Year students.
- Focusing on the examination method and making it an evaluation tool for students.

- **Total Study Hours:** 120 hours / Second Year (60 theoretical hours + 60 practical hours).
- **Date of Preparation of this Description:** 10/28/2025

Course Objectives

- Prepare physicians with strong foundational sciences that aid in understanding pathological conditions and diagnosis.
- Review modern methods used in pathological analyses and understand histological changes in pathological cases practically.

- **Course Outcomes, Teaching/Learning Methods, and Evaluation**

  1. Cognitive Objectives: Prepare students with high competency in the theoretical and practical foundations of histology and methods for conducting diagnoses of pathological cases.

  2. Course-Specific Skill Objectives: Acquire students with high-level skills in the field of pathological diagnosis to obtain accurate results for disease diagnosis.

Teaching/Learning Methods

1. Use of modern teaching methods.
2. Use of modern methods in the field of histology.

Evaluation Methods

1. Daily, monthly, and final exams.

C. Affective and Value Objectives

1. Encourage students to deal humanely with patients in accordance with human values.

D. General and Transferable Employability Skills (Other skills related to employability and personal development).

1- Prepare scientifically competent students to solve health problems.

9. Course Structure

Week	Hours	Study Year	Teaching Method	Evaluation Method
30 weeks	60 (Theoretical)	Second Year Practical Histology	Theoretical + Practical	Daily + Monthly + Term Exams
	60 (Practical)			

Sources for Curriculum Development

- Histology basis of life (first Year)
- Advance Histology (second Year)
- Harpers illustrated Histology (second Year)

Course Environment: First Semester, Second Year

First Semester Schedule

Teaching Method	Evaluation Method	Topic	Hrs	Lecturer	Week
Theoretical + Practical	Term/Final/CW	Introduction (Definition of histology, preparation of slides and type of microscope)	2	Dr. Nizak Asst. Lec. Yousif Ali	1st
Theoretical +	Term/Final/C	Review on connective	2	Dr. Nizak	2nd

Practical	W	tissue (types of cells, fibers and ground substance)		Asst. Lec. Yousif Ali	
Theoretical + Practical	Term/Final/CW	Cartilage, bone and type of growth	2	Dr. Nizak Sabhi Asst. Lec. Yousif Ali	3rd
Theoretical + Practical		Blood: composition of blood, blood cells. Haemopoiesis: stem cells, bone marrow, maturation of erythrocyte, granulocyte, and agranulocyte, origin of platelets	4	Dr. Nizak Sabhi Asst. Lec. Yousif Ali	4th & 5th
Theoretical + Practical	Term/Final/CW	Classification and type of gland, mode of secretion	3	Dr. Nizak Sabhi Asst. Lec. Yousif Ali	6th & 7th
Theoretical + Practical		Nerve tissue: neurons, glial cells, neural activity, central and peripheral nervous system	4	Dr. Nizak Sabhi Asst. Lec. Yousif Ali	8th & 9th
Theoretical + Practical	Term/Final/CW	First term examination	2	Dr. Nizak Sabhi Asst. Lec. Yousif Ali	10th
Theoretical + Practical		Circulatory system: heart, tissue of the vascular wall, types of arteries and veins, lymphatic vascular system	4	Dr. Nizak Sabhi Asst. Lec. Yousif Ali	11th & 12th
Theoretical +	Term/Final/C	Immune system and	3	Dr. Nizak	13th & 14th

Practical	W	lymphoid organs: antigens, antibody, cells of the immune system, lymphoid tissue, thymus, mucosa associated lymphoid tissue (MALT), lymph nodes and spleen		Sabhi Asst. Lec. Yousif Ali	
Theoretical + Practical		Digestive system: general structure, oral cavity, esophagus, stomach, small and large intestine with appendix	4	Dr. Nizak Sabhi Asst. Lec. Yousif Ali	15th & 16TH

Second Semester Schedule

Teaching Method	Evaluation Method	Topic	Hr.	Lecturer	Week
Theoretical + Practical		Organ associated with the digestive system: salivary glands, pancreas	4	Dr. Nizak Sabhi Asst. Lec. Yousif Ali	17TH & 18TH
Theoretical + Practical	Term/Final/CW	Organ associated with the digestive system: liver, and gallbladder	3	Dr. Nizak Sabhi	19th & 20th
Theoretical + Practical	Term/Final/CW	Respiratory system: nasal cavity, sinuses, nasopharynx, larynx, trachea, bronchial tree and lung	3	Dr. Nizak Sabhi	21st & 22nd
Theoretical + Practical		Skin: epidermis, dermis, hair, nail and glands of skin, skin appendages	3	Dr. Nizak Sabhi	23rd
Theoretical +	Term/Final/CW	Urinary system: kidneys,	3	Dr. Nizak	24th

Practical		ureters, bladder and urethra		Sabhi	
Theoretical + Practical		Second term examination	2	Dr. Nizak Sabhi	25th
Theoretical + Practical	Term/Final/CW	Endocrine glands: pituitary, adrenal and pancreatic islets, thyroid, parathyroid and pineal body	4	Dr. Nizak Sabhi	26th & 27th
Theoretical + Practical		Male reproductive system: testes, excretory genital ducts, accessory glands	2	Dr. Nizak Sabhi	28th
Theoretical + Practical	Term/Final/CW	Female reproductive system: ovaries, uterine tubes, uterus, vagina and mammary glands	4	Dr. Nizak Sabhi	29th
Theoretical + Practical		Special sense organs: eye and ear	2	Dr. Nizak Sabhi	30th

Course Objectives / Intended Learning Outcomes (ILOs)

- To adhere to the university academic calendar in teaching the theoretical material for second-Year students.
- To focus on examination methodology, ensuring it serves as an effective assessment tool for students.

Item	Description	
1	Educational Institution	College of Medicine
2	Scientific Department	Human Anatomy Dept.
3	Mode(s) of Delivery	Theoretical (Lectures)
4	Semester / Academic Year	Annual
5	Total Credit/Study Hours	30 Theoretical Hours

Subject: Medical Embryology

2nd Year

. Course Objectives:

- To provide students with the fundamental knowledge of the Years of normal embryonic development from fertilization until the end of the embryonic period.
- To understand the temporal and structural changes that occur in the embryo during the different Years of growth.
- To link the development of organs and tissues to their embryonic origins.
- To interpret the embryological basis of common congenital malformations.
- To enhance the ability to correlate embryology with subsequent basic and clinical medical subjects.

8. Intended Learning Outcomes, Teaching & Learning Methods, and Assessment:

A. Cognitive Objectives:

- Understanding the fundamental Years of human development from fertilization until the end of the embryonic period.
- Comprehending the precise temporal changes (in days and weeks) during embryonic development.
- Differentiating between the various developmental periods.
- Understanding the mechanisms of stratification, induction, and differentiation of the germ layers and their derivatives.

B. Course-Specific Skill Objectives:

- Accurately reads and interprets embryological diagrams and charts.
- Constructs a correct chronological sequence of developmental events.
- Correlates embryonic measurements (CRL, CHL, BPD) with gestational age.
- Distinguishes between embryological structures that are nominally similar.

C. Teaching and Learning Methods:

- Interactive lectures supported by diagrams.

- Educational media and illustrative images.
- Clinical correlation with pathological conditions.
- Discussions and guided self-directed learning.

D. Assessment Methods:

- Daily quizzes, midterm, and final examinations.

E. Affective and Value-Based Objectives:

- Encouraging students to interact with patients humanely and in accordance with humanitarian values.

F. General and Transferable Skills (Other skills related to employability and personal development):

- Preparing scientifically competent students to solve health-related problems.

9. Course Structure:

Week	Hours	Academic Year	Teaching Method	Assessment Method
30 wks.	30 theoretical	2nd Second Year	Theoretical (Lectures)	Daily + Midterm + Final Exams

10. Course Resources (Textbooks & References):

- **Primary Textbook:** Longman's Medical Embryology

11. Course Environment / Schedule:

- **First Semester:** [Details regarding the environment or schedule for the first semester should be mentioned here, for example: Lectures are held in Hall (X) on Mondays and Wednesdays from 9:00 AM to 10:00 AM.]

Week(s)	Hours	Lecturer	Unit / Course Topic	Teaching Method	Assessment Method
1 & 2	2	Instructor: Sadiq	Gametogenesis: Conversion of Germ Cells into Male and	Theoretical	Daily / Midterm /

		Jumaa Hussein	Female Gametes - Primordial Germ Cells - The Chromosome Theory of Inheritance - Morphological Changes During Maturation of the Gametes		Final
3 & 4	2	Instructor: Sadiq Jumaa Hussein	First Week of Development: Ovulation to Implantation - Ovarian Cycle - Fertilization - Cleavage - Blastocyst Formation	Theoretical	Daily / Midterm / Final
5	1	Instructor: Sadiq Jumaa Hussein	Second Week of Development: Bilaminar Germ Disc - Day 8 - Day 9 - Days 11 and 12 - Day 13	Theoretical	Daily / Midterm / Final
6 & 7	2	Instructor: Sadiq Jumaa Hussein	Third Week of Development: Trilaminar Germ Disc - Gastrulation: Formation of Embryonic Mesoderm and Endoderm - Formation of the Notochord - Fate Map Established During Gastrulation - Growth of the Embryonic Disc	Theoretical	Daily / Midterm / Final
8 & 9	2	Instructor: Sadiq Jumaa Hussein	Third to Eighth Weeks: The Embryonic Period - Derivatives of the Ectodermal Germ Layer - Derivatives of the Mesodermal Germ Layer - Derivatives of the	Theoretical	Daily / Midterm / Final

			Endodermal Germ Layer		
10 & 11	2	Instructor: Sadiq Jumaa Hussein	Third Month to Birth: The Fetus and Placenta - Development of the Fetus - Fetal Membranes and Placenta - Chorion Frondosum and Decidua Basalis - Structure of the Placenta - Amnion and Umbilical Cord - Placental Changes at the End of Pregnancy - Amniotic Fluid - Fetal Membranes in Twins - Parturition (Birth)	Theoretical	Daily / Midterm / Final
12	1	Instructor: Sadiq Jumaa Hussein	Birth Defects and Prenatal Diagnosis - Birth Defects - Prenatal Diagnosis - Fetal Therapy	Theoretical	Daily / Midterm / Final
13	1	Instructor: Sadiq Jumaa Hussein	The Axial Skeleton - Skull - Vertebrae and the Vertebral Column - Ribs and Sternum	Theoretical	Daily / Midterm / Final
14 & 15	2	Instructor: Sadiq Jumaa Hussein	Muscular System - Striated Skeletal Musculature - Innervation of Axial Skeletal Muscles - Skeletal Muscle and Tendons - Molecular Regulation of Muscle Development - Patterning of Muscles - Head Musculature - Limb Musculature - Cardiac Muscle	Theoretical	Daily / Midterm / Final

			- Smooth Muscle		

Second Semester:

Week(s)	Hours	Lecturer	Unit / Course Topic	Teaching Method	Assessment Method
1	1	Instructor: Sadiq Jumaa Hussein	Limbs - Limb Growth And Development - Limb Musculature	Theoretical	Daily / Midterm / Final
2 & 3	2	Instructor: Sadiq Jumaa Hussein	Cardiovascular System - Establishment and Patterning of the Primary Heart Field - Formation and Position of the Heart Tube - Formation of the Cardiac Loop - Development of the Sinus Venosus - Formation of the Cardiac Septa - Formation of the Conducting System of the Heart - Vascular Development - Circulation Before and After Birth	Theoretical	Daily / Midterm / Final
4 & 5	2	Instructor: Sadiq Jumaa Hussein	Respiratory System - Formation of the Lung Buds - Larynx - Trachea, Bronchi, And Lungs - Maturation of the Lungs	Theoretical	Daily / Midterm / Final
6 & 7	2	Instructor: Sadiq Jumaa Hussein	Digestive System - Divisions of the Gut Tube - Mesenteries - Foregut - Pancreas	Theoretical	Daily / Midterm / Final

			- Midgut - Hindgut		
8	1	Instructor: Sadiq Jumaa Hussein	Urogenital System - Urinary System - Genital System	Theoretical	Daily / Midterm / Final
9 & 10	2	Instructor: Sadiq Jumaa Hussein	Head and Neck - Pharyngeal Arches - Pharyngeal Pouches - Pharyngeal Clefts - Tongue - Thyroid Gland - Face - Nasal Cavities - Teeth	Theoretical	Daily / Midterm / Final
11	1	Instructor: Sadiq Jumaa Hussein	Central Nervous System - Spinal Cord - Brain - Cranial Nerves - Autonomic Nervous System	Theoretical	Daily / Midterm / Final
12	1	Instructor: Sadiq Jumaa Hussein	Ear - Internal Ear - Middle Ear - External Ear	Theoretical	Daily / Midterm / Final
13 & 14	2	Instructor: Sadiq Jumaa Hussein	Eye - Optic Cup and Lens Vesicle - Retina, Iris, and Ciliary Body - Lens - Choroid, Sclera, and Cornea - Vitreous Body - Optic Nerve	Theoretical	Daily / Midterm / Final
15	1	Instructor: Sadiq Jumaa Hussein	Integumentary System - Skin - Hair - Sweat Glands - Mammary Glands	Theoretical	Daily / Midterm / Final

Subjects: Medical Physiology

2nd Year

1.1. Definition

Medical Physiology is a foundational preclinical science that studies the normal functions of living organisms, with a primary focus on the integrated mechanisms and processes of the human body at the cellular, tissue, organ, and system levels. It seeks to explain how the body maintains homeostasis and serves as the essential scientific basis for understanding the deviations from normal function that characterize disease states.

1.2. Department Setting

The Department operates within the College of Medicine, providing teaching, research, and service functions. Its core activities include delivering lectures and practical laboratory sessions, developing and updating curricula, conducting scientific research, supervising student projects and theses, and collaborating with other preclinical and clinical departments on multidisciplinary projects. It utilizes modern educational tools, including simulations and digital technologies.

1.3. Mission and Objectives

The mission is to deliver comprehensive, high-quality education in human physiology, integrate theoretical knowledge with practical laboratory experience, and foster research and critical thinking. Its objectives are to:

1. Provide students with a deep understanding of the principles governing all major physiological systems.
2. Bridge basic physiological knowledge with clinical application, highlighting the physiological basis of diseases.
3. Promote faculty and student engagement in innovative and interdisciplinary research.
4. Develop students' competencies in laboratory techniques, data analysis, and the use of modern physiological equipment.
5. Cultivate professional skills, including scientific communication and ethical practice.

1.4. Description

Medical Physiology is the study of the normal functions of the human body, focusing on the mechanisms that control and coordinate vital processes. Key areas include neurophysiology, cardiovascular, respiratory, gastrointestinal, renal, endocrine, and muscular physiology. This understanding of normal function is fundamental for subsequent clinical learning and effective medical practice.

1.5. Vision

To be a recognized center of excellence in medical physiology education and research, contributing to the advancement of scientific knowledge and the improvement of human health.

1.6. Mission

To prepare medical and health sciences students with a rigorous, clinically relevant foundation in normal body function, to promote innovative research, to foster interdisciplinary collaboration, and to contribute to the community through professional development and service.

1.7. Goal

The primary goal is to provide a comprehensive understanding of normal human body function to establish the scientific foundation necessary for clinical reasoning, evidence-based medical practice, and future research.

1.8. Core References

- Guyton and Hall Textbook of Medical Physiology (Elsevier)
- Ganong's Review of Medical Physiology (McGraw-Hill)
- Boron & Boulpaep: Medical Physiology (Elsevier)
- Berne & Levy: Physiology (Elsevier)
- Supplementary journals and online resources (e.g., Physiological Reviews, PubMed Central).

1.9. **Assessment Methods for Medical Physiology Course**

1. Purpose of Assessment

The assessment strategy in the Medical Physiology course is designed to:

- Evaluate students' understanding of physiological concepts at molecular, cellular, organ, and system levels.
- Assess the ability to apply physiological principles in clinical and experimental contexts.
- Measure the acquisition of laboratory and analytical skills.
- Promote continuous learning and critical thinking.

2. **Assessment Components**

The minimum requirement of a student to be transferred to fourth year is to achieve at least 50% of the total 100 marks assigned for the course.
The marks are distributed as follows:

Assessment Tool	Type	Description	Weight
Written Examinations	Summative	Includes MCQs, SAQs, and essay-based questions to assess theoretical knowledge.	50%
Practical/OSPE	Summative	Objective assessment of lab skills, data interpretation, and use of equipment.	20%
Continuous Assessment	Formative	Includes quizzes, short tests, assignments, and class participation.	15%
Laboratory Reports	Formative	Evaluation of experiment write-ups and scientific documentation.	5%
Oral Examination (Viva Voce)	Summative	Tests comprehension, verbal articulation, and integration of knowledge.	5%
Attendance & Participation	Formative	Encourages engagement in lectures, tutorials, and labs.	5%

Students who fail to attain the 50% cut-off mark are required to re-sit in September for a comprehensive examinations similar to the final one. Failing in the re-sit examination entails the student to repeat the academic year.

1.10 **Distribution marks of community medicine in medical faculty**

- First course: 10%
- Med-term exam:20%
- Second course: 10%
- Total: 40%
- Final exam: 60%
- Final total: 100%

1.11. Scientific Teaching Methods in Medical Physiology

The teaching of Medical Physiology employs a diverse array of evidence-based, student-centered pedagogical strategies designed to foster deep comprehension, clinical integration, and critical thinking. These methods align with contemporary standards in medical education to prepare students for clinical application and scientific inquiry.

1. Interactive Lecture-Based Instruction

Structured faculty-led presentations that introduce and explain core physiological principles and complex mechanisms. These are enhanced with multimedia aids, animations, and interactive questioning to maintain engagement.

2. Problem-Based Learning (PBL)

Small-group sessions where students collaboratively analyze and solve clinically-oriented physiological scenarios. This method develops analytical reasoning, self-directed learning, and teamwork skills within system-based modules.

3. Practical Laboratory Sessions

Hands-on experiments and demonstrations using physiological instrumentation (e.g., spirometers, ECG, force transducers) and simulations. These sessions are essential for developing technical skills, scientific methodology, and the ability to interpret physiological data.

4. Team-Based Learning (TBL)

A structured, collaborative approach involving individual pre-class preparation, readiness assurance tests, and group application exercises focused on solving complex physiological and clinical problems, promoting accountability and teamwork.

5. Small-Group Tutorials & Discussions

Instructor-facilitated discussions that provide a forum for in-depth exploration of topics, clarification of concepts, and active peer-to-peer learning, thereby enhancing communication and understanding.

6. Technology-Enhanced & E-Learning

Integration of digital platforms (e.g., Learning Management Systems) to deliver multimedia content, online assessments, virtual labs, and recorded lectures, supporting flexible and self-directed learning.

7. Student-Led Seminars & Peer Teaching

Assignments where students research, prepare, and present on physiological topics, cultivating skills in knowledge synthesis, scientific communication, and teaching.

8. Formative Assessment & Continuous Feedback

Regular use of low-stakes quizzes, in-class polling, and structured feedback sessions to

monitor student progress, reinforce learning objectives, and identify areas requiring additional support throughout the course.

1.12. **Learning Outcomes in Physiology**

Learning Outcomes
The learning outcomes are aligned with the cognitive (knowledge), psychomotor (skills), and affective (attitude) domains of learning, based on Bloom's taxonomy and international medical education standards.

1. Cognitive Domain (Knowledge and Understanding)
Upon successful completion of the course, students will be able to:

- Describe the normal functions of human cells, tissues, and organ systems.
- Explain the mechanisms of homeostasis and regulatory control systems in the body.
- Interpret physiological data and relate it to normal body function.
- Analyze how different physiological systems integrate and interact under various conditions.
- Recognize the physiological basis of clinical conditions and relate them to diagnostic and therapeutic approaches.

2. Psychomotor Domain (Practical and Analytical Skills)
Students will be able to:

- Perform basic physiological experiments and operate laboratory instruments.
- Measure and record parameters such as heart rate, blood pressure, respiratory rate, reflexes, and ECG.
- Analyze and interpret experimental and clinical data.
- Prepare laboratory reports with accurate observations, results, and conclusions.
- Demonstrate proficiency in basic clinical skills related to physiology (e.g., respiratory function tests, cardiovascular assessments)

3. Affective Domain (Attitudes and Professional Behavior)
Students will be able to:

- Display professional behavior, responsibility, and ethical conduct during all academic and lab activities.
- Work effectively in teams, showing respect for peers and instructors.
- Demonstrate a commitment to lifelong learning and self-improvement in medical sciences.

- Communicate physiological concepts clearly and confidently in academic and clinical settings.
- Show a positive attitude toward scientific inquiry, patient-centered care, and inter-professional collaboration.

4. Alignment with Program Learning Outcomes (PLOs):

These outcomes contribute to broader competencies in:

- Medical knowledge
- Clinical reasoning
- Professionalism and ethics
- Communication skills
- Research and evidence-based practice

Table of contents

Terms and main subject	Topics	Hrs
First Term		
Introduction of physiology	• Functional organization of the human body and control of the "Internal Environment	1
	• The cell and its functions	1
	• Genetic control of protein synthesis, cell function, and cell reproduction	1
	• Transport of substances through cell membranes	1
	• Membrane potential and action potential	1
Physiology of muscles	• Contraction of skeletal muscle	1
	• Excitation-contraction coupling	1
	• Excitation and contraction of smooth and cardiac muscle	2
	• Muscle metabolism	1
	• Characteristics of whole muscle contraction	1
Hematology	• Red blood cells, anemia and polycythemia	1
	• Resistances of the body to infection	2
	• Immunity and allergy	2
	• Blood groups and transfusion	2
	• Blood coagulation	2

Nervous system Physiology	• Introduction to nervous system	2
	• Organization of the nervous system	2
	• Sensory receptors	2
	• Somatic sensations	2
	○ The eye: Optics of vision	2
	○ The sense of hearing	2
	○ The chemical senses-teste and smell	2
	• Spinal cord	1
	• Cortical and brain stem	2
	• Cerebellum and basal ganglia	3
	• Cerebral cortex	2
	• The limbic system and hypothalamus	2
	• States of brain activity	2
	• The autonomic nervous system and the adrenal medulla	3
	• Cerebral blood flow, cerebrospinal fluid, and brain metabolism	2
Digestive System	• Gut physiology	1
	• Propulsion and mixing of food in the alimentary tract	1
	• Secretory functions of the alimentary tract	1
	• Pancreatic secretion	1
	• Digestion in the gastrointestinal tract	1
	• Absorption in the gastrointestinal tract	1
	• Metabolism of carbohydrates	1
	• Lipid metabolism	1
	• The liver	1
	• Dietary balances; regulation of feeding	1
	• Energetics and metabolic rate	1
Urinary System	• Regulation of body fluid •	1
	• Glomerular filtration	2
	• Functional anatomy and urine formation by the kidneys	2

	• Renal tubular reabsorption and secretion	1
	• Urine concentration and dilution	1
	• Renal regulation of ions	2
	• Regulation of acid-base balance	1
	• Diuretics and kidney diseases	1
Second Term Examination		
	Second Term	
Respiratory system	• Physiology and anatomy of lung	2
	• Pulmonary ventilation	2
	• Pulmonary circulation	2
	• Physical Principles of Gas Exchange; Diffusion of Oxygen and Carbon Dioxide Through the Respiratory Membrane	2
	• Transport of oxygen and carbon dioxide in blood and tissue fluids	2
	• Aviation, high-altitude, and space physiology	2
	• Physiology of deep-sea diving and other hyperbaric conditions	2
	• Body temperature regulation and fever	2
Cardio-vascular System	• Cardiac Muscle	2
	• Rhythmical Excitation of the Heart	3
	• Electrocardiography	4
	• Electrocardiographic Interpretation Cardiac Muscle	3
	• Cardiac Arrhythmias	4
	• Overview of the Circulation	2
	• Functions of the Arterial and Venous Systems	2
	• Lymphatic System	2
	• Control of Tissue Blood Flow	2

	• Nervous Regulation of the Circulation	2
	• Arterial Pressure	3
	• Cardiac Output	2
	• Coronary Circulation	2
	• Cardiac Failure	4
	• Heart Sounds	2
	• Circulatory Shock and Its Treatment	2
Endocrinology	• Introduction to endocrinology and Pituitary gland	2
	• Thyroid gland	2
	• Adreno-corticoid Hormones	2
	• Insulin, glucagon & diabetes mellitus	2
	• Parathyroid Hormones	2
Reproduction	• Male reproductive system	2
	• Female reproductive system	2
	• Pregnancy and Lactation	2
Second Term Examination		

Teaching Duties - Overview

2.1. Undergraduate Teaching

Faculty members in the department are responsible for teaching both basic and applied physiology topics to second-year medical students. Teaching relies on theoretical lessons, practical experiments, field projects, and the applied medical reports in healthcare settings.

1. For second-year students.

2. For four fifth-year students.

2.2. Academic postgraduate teaching

The department currently have no program for postgraduate courses it is one of the major goals for future vision for diploma, master, Doctorate of philosophy (PhD), in Physiology

- Scientific courses for undergraduate students

Broad Objectives for Undergraduate Physiology

The curriculum topics are designed to help trainees acquire a solid foundation in the normal functions of the human body, preparing them for the study of pathology, pharmacology, and clinical medicine. The physiology curriculum focuses on the integration of theoretical knowledge with practical skills and fosters scientific reasoning, clinical relevance, and ethical understanding.

The broad objectives are to enable students to:

1. Understand the Principles of Human Physiology
    - Comprehend the fundamental mechanisms regulating the function of cells, tissues, organs, and systems.
    - Explain the principles of homeostasis, feedback control, and physiological balance.
2. Correlate Structure and Function
    - Relate physiological processes to anatomical structures at molecular, cellular, and systemic levels.
    - Understand how structure–function relationships influence health and disease.
3. Apply Physiological Knowledge to Clinical Practice
    - Use physiological concepts to interpret normal and abnormal clinical findings.
    - Understand the physiological basis of common signs, symptoms, and diagnostic tests.
4. Develop Practical and Experimental Skills
    - Perform basic physiological experiments and interpret data accurately.
    - Gain familiarity with instruments, simulations, and biological measurement techniques.
5. Foster Scientific Inquiry and Critical Thinking
    - Encourage evidence-based analysis and logical reasoning.
    - Cultivate an interest in research and the scientific method in medical science.
6. Promote Ethical and Professional Conduct
    - Exhibit appropriate professional behavior in classroom, laboratory, and collaborative settings.
    - Understand ethical implications in experimentation and patient-centered care.
7. Support Lifelong Learning and Academic Growth
    - Develop self-directed learning habits and adaptability to new physiological discoveries.

- Prepare for advanced courses in pathophysiology, pharmacology, and clinical disciplines.

- عنوان المادة / المنهاج :جرائم حزب البعث البائد

المرحلة: الثانية

- طرق تدريس المادة

تعتمد المادة في التقديم والمناقشة الشاملة المحايدة والتحليل التاريخي والقانوني والدستوري لمحتويات المنهاج على الطرق الآتية:

- **المحاضرة النظرية والتحليل القانوني/الدستوري :**استعراض النصوص الدستورية والقوانين والقرارات الصادرة ومقارنتها بانتهاكات الحقوق والحريات العامة .
- **طريقة المناقشة والحوار :**مناقشة الأثر الاجتماعي، والنفسي، والسياسي، والاقتصادي على المجتمع العراقي وإثارة التفكير النقدي لدى الطلبة حول مفهوم العدالة الانتقالية وبناء الدولة الديمقراطية .
- **الاستدلال وتوثيق الشواهد التاريخية :**الاعتماد على كشف استدلالي وتحليلي للأحداث التاريخية (من عام 1921 إلى 2003) وعرض الوثائق والأرقام والقرارات الصادرة .

.3مفردات المنهج (موزعة بمعدل ساعة واحدة أسبوعيًا لكل مفردة على هيئة جدول)

تم تقسيم محتويات المنهاج ومباحثه (المكونة من 3 فصول رئيسة تسبقها مقدّمة وتليها الملخص والمراجع)على **26 أسبوعًا دراسيًا**، بواقع **ساعة واحدة أسبوعياً** لكل مفردة :

ساعات التدريس الأسبوعية	الموضوع / مفردة المنهج	الأسبوع
ساعة واحدة	**مقدمة المنهاج :**استعراض الإطار العام للعدالة الانتقالية ومفهوم الدولة الاستبدادية مقابل الديمقراطية .	**الأسبوع 1**
ساعة واحدة	**الفصل الأول/ المبحث الأول :**نبذة وصفية عن الأنظمة السياسية في العراق (1921-2003): المحور الأول - النظام الملكي (1921-1958)	**الأسبوع 2**
ساعة واحدة	**المبحث الأول :**المحور الثاني - العهد الجمهوري الأول (1958-1968)	**الأسبوع 3**
ساعة واحدة	**المبحث الأول :**المحور الثالث - العهد الجمهوري البعثي (1968-2003)	**الأسبوع 4**
ساعة واحدة	**المبحث الثاني :**انتهاكات النظام البعثي للحقوق والحريات العامة: المحور الأول - انتهاك الحقوق الفكرية .	**الأسبوع 5**
ساعة واحدة	**المبحث الثاني :**المحور الأول - صور الانتهاكات في قمع الانتفاضة الشعبانية (1991)	**الأسبوع 6**
ساعة واحدة	**المبحث الثاني :**المحور الأول - الفرع الثاني: انتهاك الحريات العامة (انتخابات المجلس الوطني والصورية السياسية)	**الأسبوع 7**
ساعة واحدة	**المبحث الثاني :**المحور الأول - الفرع الثالث: انتهاك الحق في التعددية الحزبية بمراحلها الثلاث (1968-1989 وما بعدها)	**الأسبوع 8**
ساعة واحدة	**المبحث الثاني :**المحور الثاني - الانتهاكات في الحقوق الاجتماعية والسياسية والثقافية (حرية الرأي، إسقاط الجنسية، الحرمان من السفر)	**الأسبوع 9**
ساعة واحدة	**المبحث الثاني :**المحور الثاني - انتهاك الحقوق والحريات الثقافية والتضييق على المؤسسات التعليمية	**الأسبوع 10**

	والأكاديمية .	
ساعة واحدة	**المبحث الثاني :**المحور الثالث - انتهاك القانون الدولي (حرب الخليج الأولى والثانية)	**الأسبوع 11**
ساعة واحدة	**المبحث الثاني :**المحور الثالث - الحصار الدولي على العراق وآثاره الاقتصادية والإنسانية (1990-2003)	**الأسبوع 12**
ساعة واحدة	**المبحث الثالث :**أثر سلوكيات النظام البعثي في المجتمع وتسلطه على الدولة: المحور الأول - الاعتقالات العشوائية وتعذيب السجناء واعتقال الأجانب .	**الأسبوع 13**
ساعة واحدة	**المبحث الثالث :**المحور الأول - الإعدامات السياسية والعسكرية وقرارات مجلس قيادة الثورة القمعية .	**الأسبوع 14**
ساعة واحدة	**المبحث الثالث :**المحور الثاني - حصر السلطات الثلاث بيد النظام البعثي (الفصل بين السلطات، القضاء، السلطة التشريعية، السلطة التنفيذية)	**الأسبوع 15**
ساعة واحدة	**المبحث الرابع :**أثر المرحلة الانتقالية في محاربة السياسة الاستبدادية .	**الأسبوع 16**
ساعة واحدة	**الفصل الثاني/ المبحث الأول :**الميدان النفسي وأثر القمع السياسي والتخويف في النفسية العراقية .	**الأسبوع 17**
ساعة واحدة	**المبحث الثاني :**الميدان الاجتماعي وتفكك العلاقات الاجتماعية وتأثير السياسات القمعية في الأسرة .	**الأسبوع 18**
ساعة واحدة	**المبحث الثالث :**الدين والدولة والتدخل في الشؤون الدينية وتقييد الشعائر الدينية .	**الأسبوع 19**
ساعة واحدة	**المبحث الرابع :**الثقافة والإعلام وعسكرة المجتمع وتوجيه المؤسسات الثقافية لخدمة الأيديولوجية الحاكمة .	**الأسبوع 20**
ساعة واحدة	**الفصل الثالث/ المبحث الأول :**أثر القمع والحروب على البيئة والسكان: استعمال الأسلحة المحرمة دولياً والتلوث البيئي .	**الأسبوع 21**
ساعة واحدة	**المبحث الثاني :**سياسة الأرض المحروقة وتدمير البنى التحتية .	**الأسبوع 22**
ساعة واحدة	**المبحث الثالث :**تجفيف الأهوار والهجرة القسرية وتأثيرها الديموغرافي والبيئي .	**الأسبوع 23**
ساعة واحدة	**المبحث الرابع :**تدمير البيئة الزراعية والحيوانية والتلوث الإشعاعي .	**الأسبوع 24**
ساعة واحدة	**المبحث الخامس :**المقابر الجماعية وقصف دور العبادة .	**الأسبوع 25**
ساعة واحدة	**ملخص المنهاج :**مراجعة عامة وخلاصة الآثار المترتبة على حقبة النظام البعثي وآليات المعالجة والعدالة الانتقالية .	**الأسبوع 26**

Educational program description

Third Year

General Pathology (basic & clinical)

Third Year

Curriculum of Pathology

The curriculum of pathology shows the academic program of department that reveals the characteristic of curriculum and scientific outputs to be achieved by students indicating if they got the maximum scientific benefit through the offered scientific program. It must be linked to the academic curriculum description. The Department of Pathology and Forensic Medicine is concerned with the type of academic education provided to students and assisting them in studying and understanding the science of pathology and forensic medicine and its relation to clinical fields. The teaching staff in the department has made efforts to connect the theoretical concepts of pathology with related clinical cases, providing modern systematic information and aiming to elevate the student's academic level to the highest possible extent in accordance with global academic accreditation standards.

1- **Educational Institution:** University of Misan / College of Medicine.
2- **Scientific Department / Branch**: Department of pathology and forensic Medicine.
3- **Available Attendance forms for Students:** Mandatory Attendance.
4- **Academic System (Semester/Annual):** Annual System.
5- **Total Study Hours:** 120 Theory Hours + 120 Practical Hours.
6- **Date of Preparation of this Description:** 2025.
7- **Objectives of the Academic Course:** To provide means of clarification and understanding of the science of pathology to the fullest extent possible through:
    1- Describing the nature of the primary cause responsible for causing pathological changes and methods of exposure to it.

2- Describing the mechanism through which pathological changes occurred.

3- Describing the gross changes and histological changes, if present, and linking them to physiological and chemical changes, and deriving diagnostic results.

8- Outputs of the Academic Program and Methods of Teaching and Scientific Evaluation:

A. Cognitive Objectives:

1. To understand that the science of pathology serves as a scientific bridge linking basic medical sciences such as histology, anatomy, and physiology with pure clinical medical sciences such as internal medicine, surgery, and others.

2. For the student to be able to apply the medical foundations and principles learned in pathology to the cases he will see in the later academic Years.
3. To be precise in applying these foundations and principles.
4. For the principles and foundations of pathology learned to be present with them throughout their medical career.
5. For the student to be aware of the diagnostic limits of pathology and not to encroach upon other sciences.

B. Professional Skills Objectives of the Academic Program:

1. To equip students with the entire essential scientific means to understand the philosophy of each disease, symptom, or sign they encounter and to utilize this understanding in comprehending the pathological condition.
2. To teach them how to handle tissue samples from tumors or others sent by specialized surgical laboratories **for diagnostic purposes.** A descriptive study of the medical history is conducted, recording the patient's name, gender, and

age. Additionally, the method of preparing glass tissue slides for examination under the microscope is covered.

C. Teaching Methods:

1. Teaching methods include delivering theoretical lectures to students in classrooms using electronic slides presented through specialized educational software on high-resolution screens. The latest illustrative aids in pathology are utilized, including diagrams, explanatory shapes, and real images reflecting the actual disease conditions of the cases.
2. Practical lectures are given using slide presentation programs to display images of disease cases according to the lecture topic, closely linking them with what the students have learned in the theoretical material. Students are then shown pathological gross samples if available, followed by observing the tissue changes of the same case under a light microscope to form a clear and comprehensive picture of each disease case.

D. Evaluation Methods:

1. The scientific benefit to students from theoretical and practical lectures is assessed through questions and scientific discussions during and after the lecture on each topic, along with posing detailed questions about each subject, where a quick survey of the scientific outcome gleaned by the student is conducted.
2. A quick and short exam is administered shortly after each lecture, as well as written exams on paper, with two exams for each semester in addition to a midterm exam and a final exam.

9- Academic Course Development Plan:

1. Keeping up with the latest global development methods in teaching techniques and the means used in delivering theoretical and practical lectures.
2. Adopting globally agreed-upon textbooks in medical colleges, specifically in the field of pathology, and following the updates made in each new edition.

10- Scientific Structure of the Teaching Staff in the Department:

1. Assist. Prof. Dr. Mukhalad A Ramadan / Head of the Department.
2. Dr. Alaa Shamik Hassan / Blood Diseases Board / Teaching in the Department.
3. Dr. Sadeq A. Kadhim / Department Coordinator.

11- The structural framework of the course:

1- First semester / Third Year / Theoretical:

Week	Hour lecturer	Name of unite or subject	Learning method	Evaluation method
First	4hrs Dr. Alaa S. Hassan	The Cell as a Unit of Health& Disease, Cell Injury	Theory	Oral questions
Second	4hrs Dr. Alaa S. Hassan	Cell Injury, Cell Death and Adaptation	Theory	Quiz/ first term exam/ midterm exam
Third	4hrs Dr. Alaa S. Hassan	Inflammation and repairing	Theory	Quiz/ first term exam/ midterm exam
Fourth	4hrs Dr. Sadeq A. Kadhim	Pathology of bacterial and viral diseases	Theory	Quiz/ first term exam/ midterm exam
Fifth	4hrs Dr. Sadeq A. Kadhim	Pathology of fungal and parasitic diseases	Theory	Quiz/ first term exam/ midterm exam
Sixth	4hrs Dr. Alaa S. Hassan	Hemodynamic disorder fluid disturbances and hemorrhage	Theory	Quiz/ first term exam/ midterm exam
Seventh	4 Dr. Alaa S.	Thrombosis and embolism	Theory	Quiz/ first term exam/ midterm exam

	Hassan			
Eighth	4hrs Dr. Sadeq A. Kadhim	Pathology of hypersensitivity and rejection	Theory	Quiz/ first term exam/ midterm exam
Ninth	4hrs Dr. Sadeq A. Kadhim	Pathology of HIV and autoimmune disease	Theory	Quiz/ first term exam/ midterm exam
Tenth	4hrs DR. Mukhalad A. Ramadhan	Pathology of benign neoplasms	Theory	Quiz/ first term exam/ midterm exam
Eleventh	4hrs DR. Mukhalad A. Ramadhan	Pathology of malignant neoplasm	Theory	Quiz/ first term exam/ midterm exam
Twelfth	4hrs DR. Mukhalad A. Ramadhan	Pathology of genetic diseases	Theory	Quiz/ first term exam/ midterm exam
Thirteenth	4hrs DR. Mukhalad A. Ramadhan	Pathology of pediatric diseases	Theory	Quiz/ first term exam/ midterm exam
Fourteenth	4hrs DR. Mukhalad A. Ramadhan	Pathology of Environmental diseases	Theory	Quiz/ first term exam/ midterm exam
Fifteenth	4hrs DR. Mukhalad A. Ramadhan	Pathology of Nutritional diseases	Theory	Quiz/ first term exam/ midterm exam

2- Second semester / Third Year / Theoretical:

Week	Hour lecturer	Name of unite or subject	Learning method	Evaluation method
First	4hrs Dr. Alaa S. Hassan	Pathology of upper respiratory disease	Theory	Quiz/ first term exam/ midterm exam
Second	4hrs Dr. Alaa S. Hassan	Pathology of lower respiratory disease	Theory	Quiz/ first term exam/ midterm exam
Third	4hrs	Pathology of kidney diseases	Theory	Quiz/ first term

	DR. Mukhalad A. Ramadhan			exam/ midterm exam
Fourth	4hrs DR. Mukhalad A. Ramadhan	Pathology of collecting system diseases	Theory	Quiz/ first term exam/ midterm exam
Fifth	4hrs Dr. Sadeq A. Kadhim	Pathology of CNS edema, herniation, hydrocephalus, vascular diseases and thrombosis	Theory	Quiz/ first term exam/ midterm exam
Sixth	4hrs Dr. Sadeq A. Kadhim	Pathology of CNS infections neurodegenerative diseases and CNS tumors	Theory	Quiz/ first term exam/ midterm exam
Seventh	4hrs Dr. Alaa S. Hassan	Pathology of hematopoietic diseases	Theory	Quiz/ first term exam/ midterm exam
Eighth	4hrs Dr. Alaa S. Hassan	Pathology of lymphoid system	Theory	Quiz/ first term exam/ midterm exam
Ninth	4hrs DR. Mukhalad A. Ramadhan	Pathology of upper and lower GIT	Theory	Quiz/ first term exam/ midterm exam
Tenth	4 DR. Mukhalad A. Ramadhan	Pathology of liver and pancreatic diseases	Theory	Quiz/ first term exam/ midterm exam
Eleventh	4hrs Dr. Sadeq A. Kadhim	Pathology of male reproductive system (congenital, traumatic, infection and tumors)	Theory	Quiz/ first term exam/ midterm exam
Twelfth	4hrs DR. Mukhalad A. Ramadhan	Pathology of female reproductive system (congenital, traumatic, infection and tumors)	Theory	Quiz/ first term exam/ midterm exam
Thirteenth	4hrs Dr. Alaa S. Hassan	Pathology of cardiovascular diseases	Theory	Quiz/ first term exam/ midterm exam
Fourteenth	4hrs Dr. Sadeq A. Kadhim	Pathology of PNS diseases)traumatic, infections… and tumors)	Theory	Quiz/ first term exam/ midterm exam
Fifteenth	4hrs DR. Mukhalad A. Ramadhan	Pathology of musculoskeletal system	Theory	Quiz/ first term exam/ midterm exam

3- The first semester/third Year/practical:

Week	Hour lecturer	Name of unite or subject	Learning method	Evaluation method
First	4hrs Dr. Alaa S. Hassan	The Cell as a Unit of Health& Disease, Cell Injury	Practical	Oral questions
Second	4hrs Dr. Alaa S. Hassan	Cell Injury, Cell Death and Adaptation	Practical	Quiz/ first term exam/ midterm exam
Third	4hrs Dr. Alaa S. Hassan	Inflammation and repairing	Practical	Quiz/ first term exam/ midterm exam
Fourth	4hrs Dr. Sadeq A. Kadhim	Pathology of bacterial and viral diseases	Practical	Quiz/ first term exam/ midterm exam
Fifth	4hrs Dr. Sadeq A. Kadhim	Pathology of fungal and parasitic diseases	Practical	Quiz/ first term exam/ midterm exam
Sixth	4hrs Dr. Alaa S. Hassan	Hemodynamic disorder fluid disturbances and hemorrhage	Practical	Quiz/ first term exam/ midterm exam
Seventh	4hrs Dr. Alaa S. Hassan	Thrombosis and embolism	Practical	Quiz/ first term exam/ midterm exam
Eighth	4hrs Dr. Sadeq A. Kadhim	Pathology of hypersensitivity and rejection	Practical	Quiz/ first term exam/ midterm exam
Ninth	4hrs Dr. Sadeq A. Kadhim	Pathology of HIV and autoimmune disease	Practical	Quiz/ first term exam/ midterm exam
Tenth	4hrs DR. Mukhalad A. Ramadhan	Pathology of benign neoplasms	Practical	Quiz/ first term exam/ midterm exam
Eleventh	4hrs DR. Mukhalad A. Ramadhan	Pathology of malignant neoplasm	Practical	Quiz/ first term exam/ midterm exam
Twelfth	4hrs DR. Mukhalad A. Ramadhan	Pathology of genetic diseases	Practical	Quiz/ first term exam/ midterm exam
Thirteenth	4hrs DR. Mukhalad A. Ramadhan	Pathology of pediatric diseases	Practical	Quiz/ first term exam/ midterm exam

Fourteenth	4hrs DR. Mukhalad A. Ramadhan	Pathology of Environmental diseases	Practical	Quiz/ first term exam/ midterm exam
Fifteenth	4hrs DR. Mukhalad A. Ramadhan	Pathology of Nutritional diseases	Practical	Quiz/ first term exam/ midterm exam

4- The second semester/third Year/practical:

Week	Hour lecturer	Name of unite or subject	Learning method	Evaluation method
First	4hrs Dr. Alaa S. Hassan	Pathology of upper respiratory disease	Practical	Quiz/ first term exam/ midterm exam
Second	4hrs Dr. Alaa S. Hassan	Pathology of lower respiratory disease	Practical	Quiz/ first term exam/ midterm exam
Third	4hrs DR. Mukhalad A. Ramadhan	Pathology of kidney diseases	Practical	Quiz/ first term exam/ midterm exam
Fourth	4hrs DR. Mukhalad A. Ramadhan	Pathology of collecting system diseases	Practical	Quiz/ first term exam/ midterm exam
Fifth	4hrs Dr. Sadeq A. Kadhim	Pathology of CNS edema, herniation, hydrocephalus, vascular diseases and thrombosis	Practical	Quiz/ first term exam/ midterm exam
Sixth	4hrs Dr. Sadeq A. Kadhim	Pathology of CNS infections neurodegenerative diseases and CNS tumors	Practical	Quiz/ first term exam/ midterm exam
Seventh	4hrs Dr. Alaa S. Hassan	Pathology of hematopoietic diseases	Practical	Quiz/ first term exam/ midterm exam
Eighth	4hrs Dr. Alaa S. Hassan	Pathology of lymphoid system	Practical	Quiz/ first term exam/ midterm exam
Ninth	4hrs DR. Mukhalad A. Ramadhan	Pathology of upper and lower GIT	Practical	Quiz/ first term exam/ midterm exam

Tenth	4hrs DR. Mukhalad A. Ramadhan	Pathology of liver and pancreatic diseases	Practical	Quiz/ first term exam/ midterm exam
Eleventh	4hrs Dr. Sadeq A. Kadhim	Pathology of male reproductive system (congenital, traumatic, infection and tumors)	Practical	Quiz/ first term exam/ midterm exam
Twelfth	4hrs DR. Mukhalad A. Ramadhan	Pathology of female reproductive system (congenital, traumatic, infection and tumors)	Practical	Quiz/ first term exam/ midterm exam
Thirteenth	4hrs Dr. Alaa S. Hassan	Pathology of cardiovascular diseases	Practical	Quiz/ first term exam/ midterm exam
Fourteenth	4hrs Dr. Sadeq A. Kadhim	Pathology of PNS diseases)traumatic, infections… and tumors)	Practical	Quiz/ first term exam/ midterm exam
Fifteenth	4hrs DR. Mukhalad A. Ramadhan	Pathology of musculoskeletal system	Practical	Quiz/ first term exam/ midterm exam

3- The first semester/third Year/practical:

Week	Hour lecturer	Name of unite or subject	Learning method	Evaluation method
1st	4hrs Dr. Alaa S. Hassan	The Cell as a Unit of Health& Disease, Cell Injury	Practical	Oral questions
2nd	4hrs Dr. Alaa S. Hassan	Cell Injury, Cell Death and Adaptation	Practical	Quiz/ first term exam/ midterm exam
3rd	4hrs Dr. Alaa S. Hassan	Inflammation and repairing	Practical	Quiz/ first term exam/ midterm exam
4th	4hrs Dr. Sadeq A. Kadhim	Pathology of bacterial and viral diseases	Practical	Quiz/ first term exam/ midterm exam
5th	4hrs Dr. Sadeq A. Kadhim	Pathology of fungal and parasitic diseases	Practical	Quiz/ first term exam/ midterm exam
6th	4hrs Dr. Alaa S. Hassan	Hemodynamic disorder fluid disturbances and hemorrhage	Practical	Quiz/ first term exam/ midterm exam

7th	4hrs Dr. Alaa S. Hassan	Thrombosis and embolism	Practical	Quiz/ first term exam/ midterm exam
8th	4hrs Dr. Sadeq A. Kadhim	Pathology of hypersensitivity and rejection	Practical	Quiz/ first term exam/ midterm exam
9th	4hrs Dr. Sadeq A. Kadhim	Pathology of HIV and autoimmune disease	Practical	Quiz/ first term exam/ midterm exam
10th	4hrs DR. Mukhalad A. Ramadhan	Pathology of benign neoplasms	Practical	Quiz/ first term exam/ midterm exam
11th	4hrs DR. Mukhalad A. Ramadhan	Pathology of malignant neoplasm	Practical	Quiz/ first term exam/ midterm exam
12th	4hrs DR. Mukhalad A. Ramadhan	Pathology of genetic diseases	Practical	Quiz/ first term exam/ midterm exam
13th	4hrs DR. Mukhalad A. Ramadhan	Pathology of pediatric diseases	Practical	Quiz/ first term exam/ midterm exam
14th	4hrs DR. Mukhalad A. Ramadhan	Pathology of Environmental diseases	Practical	Quiz/ first term exam/ midterm exam
15th	4hrs DR. Mukhalad A. Ramadhan	Pathology of Nutritional diseases	Practical	Quiz/ first term exam/ midterm exam

5- The second semester/third Year/practical:

Week	Hour lecturer	Name of unite or subject	Learning method	Evaluation method
1st	4hrs Dr. Alaa S. Hassan	Pathology of upper respiratory disease	Practical	Quiz/ first term exam/ midterm exam
2nd	4hrs Dr. Alaa S. Hassan	Pathology of lower respiratory disease	Practical	Quiz/ first term exam/ midterm exam
3rd	4hrs Dr. Mukhalad A.	Pathology of kidney diseases	Practical	Quiz/ first term exam/ midterm exam

	Ramadhan			
4th	4hrs Dr. Mukhalad A. Ramadhan	Pathology of collecting system diseases	Practical	Quiz/ first term exam/ midterm exam
5th	4hrs Dr. Sadeq A. Kadhim	Pathology of CNS edema, herniation, hydrocephalus, vascular diseases and thrombosis	Practical	Quiz/ first term exam/ midterm exam
6th	4hrs Dr. Sadeq A. Kadhim	Pathology of CNS infections neurodegenerative diseases and CNS tumors	Practical	Quiz/ first term exam/ midterm exam
7th	4hrs Dr. Alaa S. Hassan	Pathology of hematopoietic diseases	Practical	Quiz/ first term exam/ midterm exam
8th	4hrs Dr. Alaa S. Hassan	Pathology of lymphoid system	Practical	Quiz/ first term exam/ midterm exam
9th	4hrs Dr. Mukhalad A. Ramadhan	Pathology of upper and lower GIT	Practical	Quiz/ first term exam/ midterm exam
10th	4hrs Dr. Mukhalad A. Ramadhan	Pathology of liver and pancreatic diseases	Practical	Quiz/ first term exam/ midterm exam
11th	4hrs Dr. Sadeq A. Kadhim	Pathology of male reproductive ,system (congenital, traumatic infection and tumors)	Practical	Quiz/ first term exam/ midterm exam
12th	4hrs DR. Mukhalad A. Ramadhan	Pathology of female reproductive ,system (congenital, traumatic infection and tumors)	Practical	Quiz/ first term exam/ midterm exam
13th	4hrs Dr. Alaa S. Hassan	Pathology of cardiovascular diseases	Practical	Quiz/ first term exam/ midterm exam
14th	4hrs Dr. Sadeq A. Kadhim	Pathology of PNS diseases traumatic, infections… and) tumors)	Practical	Quiz/ first term exam/ midterm exam
15th	4hrs DR. Mukhalad A. Ramadhan	Pathology of musculoskeletal system	Practical	Quiz/ first term exam/ midterm exam

Subject: Pharmacology

Third Year

Program description

- This course description provides a concise summary of the key characteristics of the course and the intended learning outcomes expected from the student. It demonstrates whether the student has maximized the available learning opportunities and must be linked to the program description.
- The Department of Pharmacology and Therapeutics has always placed great emphasis on the quality of academic education and on assisting students in studying pharmacology, therapeutics, and their relationship to clinical fields.
- The department's staff makes every possible effort to link pharmacological knowledge to important clinical cases and to provide students with useful, up-to-date information. This department will work diligently to achieve its expected goals, and we hope that our efforts will help in acquiring pharmacological knowledge, which is fundamental in modern medicine.

Course Description Form

No.	Item	Description
1	**Educational Institution**	College of Medicine / University of Misan
2	**Academic Department / Centre**	Department of Pharmacology
3	**Modes of Attendance**	(Theoretical Lectures) Practical
4	**Semester / Academic Year**	Annual
5	**Total Credit/Study Hours**	90 hours (Theoretical Lectures) + 60 practical hours
6	**Date of This Description**	15/04/2023

7. Course Objectives

- To define the functions of different drug classes.
- To describe the mechanism of action of different drug classes.
- To estimate the normal values of various pharmacokinetic and pharmacodynamics parameters.
- To illustrate the degree of deviation in the physiological functions of various body systems.

1. Course Outcomes, Teaching and Learning Methods, and Assessment

A. Cognitive Objectives

A1. To define the functions of different drug classes.

A2. To describe the mechanism of action of different drug classes and sequence the events

associated with these mechanisms.
A3. To estimate the normal values of various pharmacokinetic and pharmacodynamic parameters.
A4. To illustrate the degree of deviation in the physiological functions of various body systems in certain clinical disorders.
A5. To provide a scientific explanation for various biological changes associated with disorders.
A6. To demonstrate the beneficial and harmful effects of different drugs on all vital body systems.

B. Course-Specific Skill Objectives

- To train students to become doctors with scientific expertise in the clinical and theoretical aspects of drugs, enabling their safe and optimal use in treating all types of diseases.
- To provide fundamental information on all drug categories, including how to test them practically, and to demonstrate their therapeutic and toxic effects on laboratory animals before applying this knowledge in the clinical setting for patient treatment.

Teaching and Learning Methods

- Theoretical lectures using Data show presentations, scientific videos, and modern/traditional tools to explain core pharmacological concepts. In addition, practical lectures are conducted in laboratories, summarized via Datashow presentations.

Assessment Methods

- Conducting midterm, semi-annual, and final theoretical examinations to assess students' understanding of pharmacology, along with short practical quizzes and tests.

1. Course Development Plan

1. Establishing a scientific laboratory system.
2. Updating the curriculum to align with global advancements.
3. Introducing a new course focused on teaching medicinal plants and herbal-derived pharmaceuticals.

2. Academic Structure of the Department:

- **Lecturer Rasha Karim Khudhair** / Head of Pharmacology Department / Master of Pharmacology / College of Medicine
- **Lecturer Afaf Abdullah** / Department Coordinator / Master of Pharmacology and Toxicology / College of Veterinary Medicine

Course Environment: First Semester, Third Year

Week	Hours	Lecturer	Unit / Topic	Teaching Method	Assessment Method
1	3	Lec. Afaf Abdullah	Introduction: Definitions of clinical pharmacology, toxicology, drugs. Evaluation of new drugs: preclinical and clinical studies.	Presentation	Midterm / Final / Quiz
2	3	Lec. Rasha Karim Khudhair	Pharmacodynamics: Definitions of receptors, types of receptors, ligands, and explanations of drugs' mechanism of action.	Presentation	Midterm / Final / Quiz
3-4	5	Lec. Afaf Abdullah	Pharmacokinetics: Absorption, Distribution, Metabolism, and Excretion of drugs.	Presentation	Midterm / Final / Quiz
5	1	Lec. Rasha Karim Khudhair	Pharmacogenetics: Definition of clinical pharmacology and its relation to genetic alterations.	Presentation	Midterm / Final / Quiz
6	3	Lec. Afaf Abdullah	Cholinergic System: Parasympathetic system, cholinergic drugs, anticholinergic drugs, and organophosphorus poisoning.	Presentation	Midterm / Final / Quiz
7-8	5	Lec. Rasha Karim Khudhair	Adrenergic System: Sympathetic system, sympathomimetic drugs, sympatholytic drugs, uses and side effects.	Presentation	Midterm / Final / Quiz
9	2	Lec. Rasha Karim Khudhair	Antihistamines, Serotonin-like drugs, and Prostaglandins.	Presentation	Midterm / Final / Quiz

10			First Semester Examinations		
11	3	Lec. Afaf Abdullah	Antihypertensive: Definition of hypertension, types of hypertension, antihypertensive drugs: Diuretics, ACE Inhibitors, Beta-Blockers, Calcium Channel Blockers, Centrally acting drugs, uses and side effects.	Presentation	Midterm / Final / Quiz
12	2	Lec. Rasha Karim Khudhair	Antianginal Drugs: Types of angina, treatment of angina, uses and side effects of antianginal drugs.	Presentation	Midterm / Final / Quiz
13	3	Lec. Rasha Karim Khudhair	Antiarrhythmic Drugs: Arrhythmia, treatment of arrhythmia, drugs: Class I, Class II, Class III, Class IV, uses, side effects, and contraindications.	Presentation	Midterm / Final / Quiz
14	3	Lec. Rasha Karim Khudhair	Heart Failure Treatment: Digitalis effects and side effects.	Presentation	Midterm / Final / Quiz
15	3	Lec. Rasha Karim Khudhair	Anticoagulants: Heparin and warfarin clinical uses and side effects, with direct thrombin inhibitors.	Presentation	Midterm / Final / Quiz

Second Semester

Week	Hours	Lecturer	Unit / Topic	Teaching Method	Assessment Method
1	3	Lec. Rasha Karim Khudhair	Non-narcotic and NSAIDs: Paracetamol and aspirin, with selective and non-selective cyclooxygenase inhibitors.	Presentation	Midterm / Final / Quiz
2	3	Lec.	Narcotic Analgesics (Opioid	Presentation	Midterm /

		Rasha Karim Khudhair	Drugs): Morphine and morphine-related drugs like pethidine, their uses, side effects, and contraindications, with a review of opioid receptors.		Final / Quiz
3	2	Lec. Rasha Karim Khudhair	Drugs Acting on the Respiratory Tract: Drugs used for asthma treatment (e.g., bronchodilators, corticosteroids), drugs for COPD, and drugs for different types of cough (e.g., expectorants and centrally acting drugs).	Presentation	Midterm / Final / Quiz
4	3	Lec. Afaf Abdullah	Drugs Acting on the GIT: Antacids, laxatives, and constipation treatment types, uses, and side effects.	Presentation	Midterm / Final / Quiz
5	2	Lec. Afaf Abdullah	Anemia: Types of anemia and its treatment. Hypolipidemic Drugs	Presentation	Midterm / Final / Quiz
5 (Cont.)	1	Lec. Afaf Abdullah	Drugs for Gout: Definition of gout, hyperuricemia, and its treatment.	Presentation	Midterm / Final / Quiz
6	3	Lec. Afaf Abdullah	Antipsychotic Drugs: Schizophrenia treatment with lithium. General Anesthesia: Years of anesthesia, induction, maintenance, and recovery, with a full explanation of drugs. Local Anesthesia: Types of drugs like lidocaine, their clinical uses and side effects.	Presentation	Midterm / Final / Quiz

7	3	Lec. Rasha Karim Khudhair	Endocrine System: Hypothalamus, pituitary hormones regulating total body functions, including hormones released from the hypothalamus to the anterior and posterior pituitary and related drugs with their effects on body organs.	Presentation	Midterm / Final / Quiz
8	3	Lec. Rasha Karim Khudhair	Antidiabetic Drugs: Definition of Diabetes Mellitus, insulin types, uses, and side effects, with oral hypoglycemic drugs like metformin and glipizide.	Presentation	Midterm / Final / Quiz
9			Midterm Examination		
10	3	Lec. Rasha Karim Khudhair	Thyroid Drugs: Hyperthyroidism, goiter, hypothyroidism treatment. Adrenal Steroids: Glucocorticoids and mineralocorticoids (e.g., dexamethasone, aldosterone), their uses, side effects, and contraindications.	Presentation	Midterm / Final / Quiz
11	3	Lec. Afaf Abdullah	CNS Drugs: Anxiolytics and hypnotics, antidepressants like diazepam and TCAs, their types, uses, and side effects.	Presentation	Midterm / Final / Quiz
12	2	Lec. Rasha Karim Khudhair	Antiepileptics: Definition of seizure and epilepsy, types of seizures, and anti-epileptic drugs, their clinical uses and	Presentation	Midterm / Final / Quiz

			side effects. Antiparkinsonian Drugs: Levodopa and anticholinergic drugs used for the treatment of Parkinson's disease.		
13	5	Lec. Rasha Karim Khudhair	Antibiotics: Cell wall synthesis inhibitors, protein synthesis inhibitors, nucleic acid synthesis inhibitors, their clinical uses, side effects, and spectrum of activity.	Presentation	Midterm / Final / Quiz
14	2	Lec. Rasha Karim Khudhair	Antituberculosis drugs, Antimalarial drugs.	Presentation	Midterm / Final / Quiz
15	2	Lec. Afaf Abdullah	Antifungals, Antivirals.	Presentation	Midterm / Final / Quiz

Practical pharmacology

Clinical Session (15 weeks) based on small group teaching	Week
(Evaluation of new drugs) a simple method to estimate LD50; to compare between the toxicity of various compounds even if they have the same LD50; and to estimate the therapeutic index.	1
General pharmacology: Pharmacokinetics study: definition of the term bioavailability, methods used for its calculation, and the significance of the first pass metabolism of drugs, to discuss binding of drugs to plasma proteins and its significance in the interaction between drugs, discuss the terms: enzyme inhibition, enzyme induction, and plasma level monitoring, various methods of drug elimination (clearance) and the effect of disease on drug kinetics.	2

Pharmacodynamics study: Receptors as one mechanism of action of drugs; other mechanisms of drug action, types of antagonists, up-regulation, and down-regulation.	1
Autonomic Nervous System: Sympathetic & Parasympathetic What is the mechanism of the drug in producing meiosis? Why the symptoms and sign are relieved by this drug? Which drugs should cautiously be given for such patient ? Discuss with respect various cholinergic mechanisms mediated by muscarinic and nicotinic receptors and their antagonists. Discuss the methods of terminating nor-adrenaline after being released from the nerve endings, and the drugs that can inhibit them; adrenergic receptors on which adrenaline acts, and the effect they mediate, the metabolic effects mediated by beta-2 receptor and their role in regulation of potassium level in addition to other metabolic effects.	2
Central Nervous system: Anxiolytics and hypnotics: Try to compare the use of barbiturates and benzodiazepines as hypnotics. What precautions you take in prescribing sedatives for elderly patients. What pharmacological property does diazepam have if used for a long time? Apart from anxiety, what are other uses of diazepam and related benzodiazepines? Antidepressants: depression with insomnia, What information you give to patient, especially in relation to the dose, duration of treatment and possible adverse effects? Antiepileptics: What are the main adverse effects of carbamazepine? What other clinical uses carbamazepine has apart from epilepsy? Antiparkinsonians: Which parkinson manifestations benefit more from levodopa? Can excess of levodopa produce involuntary movements? *How does pyridoxine (B6) interact with levodopa?* *Which antiemetic you choose to treat the vomiting resulting from the use of levodopa (cyclizine, domperidone, metoclopramide)?*	2
Cardiovascular system: Which antihypertensive drug the patient might be using, What are its other Indications? How does this drug interact with gastroenteritis Arrhythmia: diagnosis of atrial fibrillation . How would you treat ? Why did the doctor started	2

her on warfarin Heart failure drugs: congestive heart failure with atrial fibrillation. What drugs might be used to treat this condition? If diuretics are used, how would these drugs interact with digoxin and captopril?	
Respiratory system The diagnosis of bronchial asthma Is there any difference between short and long beta-2 stimulants? Before injecting aminophylline, what drug inquiry you should make? What is the role of corticosteroids, oral and inhaled, in treatment of acute and chronic bronchial asthma? Are there other causes of dyspnoea apart from bronchial asthma? Do you use cromoglycate for treatment of acute attack of asthma? Endocrine System: Type II diabetes mellitus. What are the lines of management of such a case? If you decide to give oral hypoglycaemic drugs, which group you choose? Do you change the drug(s) for pregnant? Case of hypoglycaemic coma. What is the possible cause of his hypoglycaemic coma? What are the warning symptoms of hypoglycaemia? What are the drugs that can be used to treat his condition? Antithyroid drugs High level of T3 and T4. What are the lines of treatment of such a case? What are the advantages and disadvantages of each group of drugs used in this patient? What warnings should be given to the patient when carbimazole is prescribed? What is your decision if patient becomes pregnant? Vasopressin What is desmopressin? What is its mechanism of action, route of administration and duration of treatment in such condition? Are there other drugs that can be used in treatment of nocturnal diuresis? What are other clinical uses of vasopressin and its analogues?	2

Antibiotics: Antibacterial: The relationship between osteomyelitis and sickle cell anemia and the drugs which are effective . Discuss in terms of distribution and side effects, and the causative microorganism . Anti- TB: the diagnosis of pulmonary tuberculosis . a. What is your treatment strategy in such case? b. Screening other family members for the disease, Would you apply the same treatment course? c. What chemoprophylactic measure might be taken for the exposed persons in the same family? d. The student should also know the different adverse reaction to anti-tuberculosis drugs. Antimalarial drugs : revealed *P.falciparum* Why did this patient not respond to chloroquine? What is the proper way of treating such case ? Can you arrange a chemoprophylactic program for travelers to areas endemic with malarial parasite	3
Drugs acting on the uterus: Induction of labour . What is the drug of choice in such condition? What are the other drugs that can be used for induction of labor? What are the differences between oxytocin and ergometrine?	1

Subject: Medical Microbiology – third Year

1. Definition

Microbiology and Parasitology is a core medical science that studies microorganisms (bacteria, viruses, fungi) and parasites, with a focus on their structure, classification, pathogenesis, and role in human health and disease. The subject integrates **General Microbiology**, **Systemic Bacteriology**, **Immunology**, **Virology**, and **Mycology**, along with

practical laboratory skills essential for diagnosing infectious diseases and understanding immune responses.

2. Mission

To equip medical students with comprehensive knowledge and practical skills in medical microbiology and immunology, enabling them to understand, diagnose, prevent, and manage infectious diseases in clinical practice, and to contribute effectively to public health and patient care in Iraq and beyond.

3. Goals

- To provide a strong foundation in microbial biology, pathogenicity, and host-microbe interactions.
- To develop competency in laboratory techniques for identifying pathogens and assessing immune responses.
- To prepare students for clinical roles involving infection control, antimicrobial therapy, vaccination, and immunological disorders.

4. Objectives

By the end of the course, students will be able to:

- Classify and describe major bacterial, viral, fungal, and parasitic pathogens.
- Understand mechanisms of microbial pathogenesis, immune response, and principles of sterilization/disinfection.
- Perform and interpret common microbiological and immunological lab tests.
- Relate microbiological knowledge to clinical scenarios, including diagnosis and management of infectious diseases.
- Apply principles of immunology to hypersensitivity, autoimmunity, transplantation, and vaccination.

5. Learning Methods

1. **Lectures** – Theoretical instruction delivered weekly (3 hours/week) covering core topics in microbiology, immunology, virology, and mycology.

2. **Practical Laboratory Sessions** – Hands-on training (2 hours/week) including staining, culturing, biochemical tests, serological assays, and diagnostic techniques.

6. Assessment Methods

- **Theoretical Exams** – Written tests covering lecture content, including multiple-choice, short-answer, and essay questions.
- **Practical Exams** – Lab-based assessments evaluating technical skills, interpretation of results, and diagnostic reasoning.

Department of Microbiology & Parasitology

M.B.CH.B. Students / Syllabus of Microbiology, 3rd year

90 Hours Theory (3 Hours/Week)

60 Hours Practical (2 Hours/Week)

Topic	hrs.	Lecturer
Part I. General Microbiology	12 hrs.	Jawetz, Melnick & Adel ergs. .Medical Microbiology. 28ed
Introduction to the medical microbiology	1	
Bacterial cell & Classification	2	
Growth requirements, bacterial growth & culture media.	2	
Sterilization, Disinfections & Antimicrobial agents.	2	
Microbial Genetics.	1	
Pathogenesis of microbial infection	2	
Normal flora	1	
Review	1	
Part II : Systemic Bacteriology	20 hrs.	
- Gram positive bacteria	7 hrs.	
Staphylococcus (cocci shape bacteria)	1	
Streptococcus spp. & Pneumococci.	1	

Corynebacterium & Listeria spp.	1	
Clostridium spp. & Bacillus spp. bacteria (Spore forming)	2	
Propiobacterium spp.	1	
Mycobacterium	1	
B – Gram negative bacteria	13 hrs.	
Neisseria spp.	1	Topley and Wilson's (Microbiology and Microbial infections)- Systematic Bacteriology Microbiology an Introduction (Gerard j. TOrtora and etc
Hemophilus & Pasteurella	1	
Bordetella & Brucella	1	
Legionella *pneumophila* & Francisella	1	
Enterobacteriacae family (*E. coli* , Klebsiella , Salmonella , Proteus , Shigella , Acinetobacter , & other associated bacteria	3	
Pseudomonas spp.	1	
Yersinia spp.	1	
Helicobacter pylori	1	
Vibrio & Campylobacter	1	
Spirochete bacteria (Borelli , Spirullum , & Treponema) .	2	
Part III. Intracellular parasitic bacteria	6 hrs.	
Chlamydia spp.	1	
Mycoplasma spp.	2	
Rickettsia spp.	1	
Urine, stool samples & Body fluids.	2	
Part IV. Basic & Clinical immunology	20 hrs.	
Introduction to immune system.	2	

Antigen & antibody , Cellular basic of immune system	1	Maisaa G: 1- Medical Microbiology Jawet'z Review of Microbiology and -2 Immunology, Warren Levinson Clinical Immunology and -3 Serology, Christine Dorresteyn Stevens Immunology, Ivan Roitt, -4 David Male, Jonathan Brostoff
B cell development, generation of B cells, regulation of B cell development, positive & negative selection of B cells .	1	
T cell development, generation of T cells, positive selection of T cells and negative selection of T cells.	1	
Innate & Acquired immunity	2	
The Complement system , cascades and regulation of complement function	1	
Immune system cells migration and inflammation .	1	
Hypersensitivity reactions	2	
Immunological tolerance	1	
Transplantation	1	
Autoimmunity diseases	2	
Tumor immunity	2	
Vaccination	1	
Immunotherapy	1	
Infection and immunity	1	
Part V. Medical Virology	26 hrs.	
A – General Virology	8 hrs.	Dr.Mohmmed Human Virology (Colier) Medical Microbiology Jawer'z
General properties & Classification of virus	2	
Replication of virus and genetics	2	
Cultivation of viruses, effect of virus on host cells.	1	
Viral Pathogenesis (acute, chronic, latent, and slow viral infection).	2	
Prevention and treatment of viral infections: interferon, antiviral chemotherapy and viral vaccines.	1	
B – Systemic virology	18 hrs.	
Parvo virus	1	

Adeno & Pox virus	2	
Herpes virus family	2	
Orthomyxo virus family	1	
Paromyxovirus family	1	
Picorna virus	1	
Viral hepatitis	2	
Viral gastroenteritis	2	
Arbovirus	1	
Oncogenic virus	2	
Retro virus (HIV) infection	2	
Reo, corona virus, SARS	1	
Part VI. : Medical Mycology	6 hrs.	
Introduction & general properties of fungi	2	
Structures & Classification of fungi	1	
Superficial mycosis	1	
Cutaneous & Subcutaneous mycosis	1	
Systemic & Opportunistic fungi	1	

Practical of Microbiology

Lab. No.	No. of Weeks	Lecturer Sanaa Basher
Part I :Bacterial Practical sessions	6 Weeks	
1 – Orientation to microbiology laboratory Safety procedure & precaution. General laboratory.	1	Sanaa Basher

2 – Culture Media, pure culture and colony morphology . A – Preparation of Nutrient agar . B – Culturing of Microorganism C – Microscopic .	1	
3 – Staining technique. A – Simple stain B –Differential stains (Gram stain) C- Special stain (Zeihl-neelsen , spore , capsule) .	1	
4- Sterilization & Disinfection.	1	
5 – Biochemical reaction test.	1	
6 – Antibiotic sensitivity testing.	1	
Part II : Systemic bacteriology diagnostic lab.	8 Weeks	
Which included: 1 – Microscopic characteristic study. 2 – Cultural feature study. 3 – Biochemical test study. a – Selective & differential media study. b – Serological study.		Sanaa Basher Bailey & Scott's Diagnostic .1 Microbiology Jawetz, Melnick, & Adelberg's Medical .2 .Microbiology Textbook of Diagnostic Microbiology .3 connie R. Mahon
A – Staphylococcus spp. & Streptococcus spp. & Pneumococci	1	
B – Neisseria spp & Corynibacteria spp	1	
C – *Mycobacterium tuberculosis*	1	
D –.– Spore forming bacteria 1 – Clostridium spp. 2 – Bacillus spp.	1	
E – Enterobacteracae family included : *E. coli* , Salmonella , Shigella , Klebsiella ,Proteus & Pseudomonas spp.	1	
F – *Vibrio cholera* & *Helicobacter pylori*	1	Zinab Mohmad
H – Haemophilus & Pasteurella & *Bordettela pertussis*	1	- Diagnostic Microbiology (Bailey & scott's). 1 2- Medical Microbiology(Jawetz,Melnick, & Adelberg's
K – Diagnostic Microbiology: Urine & stool samples.	1	
Part III : Clinical immunology : including	8 Weeks	
A – Serological test diagnosis :		
1 – Agglutination test (Direct & indirect)Slide & tubes test	1	
2 – Complement fixation test	1	
3 – ELISA test	1	
4 - Ab-Ag reaction (Immunoflourescence test and RadioImmuniAssay)	1	
5 - Immunohistochemistry (IHC) .	1	
6 - *In situ* Hybridization (ISH).	1	
7 - Flowcytometery	1	

B – Molecular Detection (PCR) .	1	
Part IV : Virology	3 Weeks	
Methods of diagnosis of viral infections 1 – Isolation of the virus. a – Tissue culture. b- Embrocated egg . c – Animal inoculation. D- Detection of viruses using immuno-electron microscopy (IEM).	1	
2 – Cytopathic effect study, Transformation, slide projection.	1	
3 – Serological test identification of virus. a – Viral neutralization test. b-Hemagglutination (HA)&heminhibition test . c – Plaque tech. d – Gel diffusion.	1	
Part V : Medical Mycology	3 Weeks	
1 – Microscopic characteristic study. 2 – Cultural feature study. 3 – Biochemical test study. a – Selective & differential media study. b – Serological study.		
Dermatophytes	1	
Candidia spp.	1	
Systemic fungi: Cryptococcus . *Histoplasma capsulatum* *Sporotrichum schenkii*	1	

Medical Parasitology

3rd year

60 Hours Theory (2 Hours/Week)

60 Hours Practical (2 Hours/Week)

Number of Units: 6

General Description of the Parasitology Course

The Parasitology course is one of the fundamental branches of medical sciences, focusing on the study of microorganisms that parasitize humans or animals and cause various human diseases. This course covers the identification, classification, life cycles, transmission methods, and pathological effects of parasites, as well as diagnosis, treatment, and prevention methods. The curriculum typically includes:

1. Protozoa: Such as Amoeba and Leishmania.

2. Medical Helminthology
   • Cestodes (Tapeworms)
   • Trematodes/Flukes
   • Nematodes (Roundworms)
3. Medical Entomology
4. Laboratory Methods for Diagnosing Parasitic Infections
5. Body Immunity Against Parasites and Immune System Interactions

Emphasis is placed on integrating theoretical knowledge with practical applications in the laboratory, helping students understand the relationship between these organisms, human disease, and control measures in clinical and public health settings.

 Key Techniques Used in Parasite Diagnosis in the Laboratory

Parasite diagnosis depends on the type of parasite and the site of infection, involving a range of traditional and modern techniques for accurate and rapid detection. Key methods include:

 Microscopic Examination

- Used to examine stool, blood, urine, or tissue samples.
- Allows direct visualization of parasites, their eggs, or cystic Years.
- Includes special staining techniques (e.g., Ziehl-Neelsen stain, acid-fast modified stains).

 Molecular Diagnostics (e.g., Polymerase Chain Reaction - PCR)

- Detects parasite genetic material with high precision.
- Useful for accurate species identification, even in cases with low parasitic load.

 Serological and Immunological Tests

- Such as Enzyme-Linked Immunosorbent Assay (ELISA) to detect antibodies or antigens in blood or stool.
- Particularly useful for diagnosing parasites that are difficult to visualize directly, like Toxoplasma and Leishmania.

 Laboratory Culture

- Used to grow certain parasites in specialized media for easier identification.
- Helpful for intestinal or blood parasites requiring cultivation prior to examination.

 Advanced Techniques

- Immunofluorescence: Identifies parasite antigens using fluorescent dyes.
- Electrophoresis and Fourier-Transform Infrared Spectroscopy (FTIR): Analyzes parasite proteins and biological components.
- Spectroscopy and Electron Microscopy: Detects subtle changes in infected cells.

 Teaching Methods for the Parasitology Course

Teaching this course integrates theoretical and practical aspects, with a focus on deep understanding and clinical application. The approach includes:

1. Theoretical Lectures

- Delivered using PowerPoint presentations supported by illustrations and educational videos.
- Includes videos demonstrating the life cycles of parasites like Leishmania, Schistosoma, Malaria, etc., focusing on developmental Years and transmission.
- Videos showing parasite movement and activity under the microscope enhance visual understanding and link theory to reality.
- Students are encouraged to ask questions and participate in class discussions.

2. Practical Component (Laboratory)

- Students are trained in direct microscopic examination using pre-prepared slides for each parasite type.
- Training includes:
  - Identifying different parasite Years (e.g., cysts, trophozoites, eggs).
  - Using special stains like Ziehl-Neelsen and iodine stains.
  - Preparing new slides from real samples (stool, blood, urine).
- Students are encouraged to take notes and draw observations under the microscope.

3. Interactive Activities

- Organizing discussion sessions and student presentations on selected parasites.
- Conducting short quizzes after each unit to reinforce understanding.
- Potential field visits to public health laboratories or disease control centers.

 Objectives of Teaching Parasitology to Medical Students

Teaching Parasitology aims to equip medical students with the knowledge and skills necessary to understand, diagnose, prevent, and treat parasitic diseases in humans. This includes:

1. Comprehensive understanding of medical parasites in terms of classification, life cycles, geographical distribution, and transmission methods.

2. Differentiating between various parasite types based on their morphological and microscopic characteristics at different Years.
3. Linking pathological changes caused by parasites to clinical symptoms observed in patients.
4. Mastering laboratory and clinical diagnostic methods using microscopy, immunological tests, and molecular diagnostics.
5. Familiarity with treatment, prevention, and control methods, including pharmacological interventions and public health measures.
6. Enhancing epidemiological awareness of parasitic diseases prevalent locally and globally, especially in high-burden regions.
7. Preparing students to handle real-world clinical cases involving parasitic diseases, whether in hospitals or public health programs.
8. Fostering critical thinking and scientific research in parasitology through practical training and participation in research projects.

 Behavioral and Professional Aspects for Students

1. Ethical commitment and academic integrity in studies and reports.
2. Adherence to biosafety rules in the laboratory.
3. Regular attendance and discipline in submitting assignments.
4. Cooperation with peers and faculty members.
5. Accuracy in microscopic examination and note-taking.
6. Demonstrating scientific curiosity and initiative in research.
7. Awareness of the importance of parasitic diseases in public health.

Clinical Communication Skills – Taking Medical History and Signs

1. Professional introduction and building trust with the patient.
2. Collecting the chief complaint and symptom details using systematic methods like SOCRATES.
3. Gathering a complete medical history (medical, familial, social).
4. Focusing on parasitic symptoms such as diarrhea, itching, fever, and weight loss.
5. Verifying risk factors like travel, contaminated water, or animal contact.
6. Accurately recording and analyzing information to formulate diagnostic hypotheses.

4. Assessment and Examinations

- Continuous assessment includes laboratory reports, assignments, and class presentations.
- Theoretical exams consist of multiple-choice questions, essays, and clinical case studies.
- Practical exams evaluate microscopic examination and laboratory diagnostic skills.

5. Approved References

- Textbooks such as:
  - *Medical Parasitology* by Markell, Voge & John.
  - *Foundations of Parasitology* by Roberts & Janovy.
- Reliable electronic sources and recent scientific articles.

Overall Annual Grading Breakdown (out of 100)

- Annual Continuous Assessment: 40 marks
  - First Semester: 10 marks
    - Theory: Includes class activities (2 marks) and end-of-semester exam (5–7 marks).
    - Practical: Includes class activities, daily practical exams, and end-of-semester practical exam (3 marks).
  - Second Semester: 10 marks
    - Theory: Includes class activities (2 marks) and end-of-semester exam (5–7 marks).
    - Practical: Includes class activities, daily practical exams, and end-of-semester practical exam (3 marks).
  - Mid-Year Exam: 20 marks
    - Theory: 15 marks
    - Practical: 5 marks
- Final Exam: 60 marks
  - Theory: 45 marks
  - Practical: 15 marks

Course Instructors

- Theory:
  - Prof. Dr. Majid Shiyal Rahima: 20 hours per class.
  - Assoc. Prof. Dr. Rasha Khalil Abduljalil: 40 hours per class.
- Practical:
  - Assoc. Prof. Dr. Rasha Khalil Abduljalil
  - Lecturer Zainab Muhammad Aidi

Topic	Hours	Lecturer
Part I.	18 hrs.	Dr. Rasha
Introduction to the medical Parasitology –	3	Dr. Rasha Khalil

Protozoa		1-Clinical Parasitology A PRACTICAL APPROACH Second Edition 2-Textbook of MEDICAL PARASITOLOGY 3Foundationsof Parasitology 4-VADEMECUM Parasitology LANDES BIOSCIENCE Austin, Texas USA
1 – Entamoeba of man *E. histolytica* *E. coli* *E. gingivalis* *E. hartmanni* *Endolimax nana* *Iodamoeba butschlii*	3	
2 – *Flagellates protozoa* *A – Intestinal , oral & urogenital flagellates ,* *Giardia lamblia , Dientamoeba fragilis , Trichomonas tenax , Blastocysitis hominis , T. vaginalis , Chilomastix mesnili* and other intestinal flagellates .	3	
B – Blood & tissues flagellated : *Leishmania tropica* complex *L. donovani , L . braziliensis , L. Mexicana , trypanosome rhodesiense , T. gambiense , T. cruzi*	3	
3 – Ciliate : *Balantidium coli*	1	
4 – Sporozoa : Malaria parasite : *Plasmodium vivax , P. malariae , P. falciparum , P. ovale .* *Toxoplasma , Pneumocystis , Emeria , Sarcocystis , and Cryptosporidium .*	6	
Part II : Medical helminthology	12 hrs.	
1 – Cestodes : General consideration	1	
Taenia saginata , T. solium	1	
Echinococcus & hydatid diseases	1	
Diphylobothrium & sparganosis	1	
Dipylidium caninum	1	
Hymenolepis nana , H. diminuta	1	
Multiceps multiceps	1	
2 – Trematodes (flukes)	1	
Fasciola hepatica & F. gigantica	1	
Clonorchis sinensis & Opisthorchis felineus	1	
Intestinal and lung flukes	1	
Schistosoma haematobium *S. mansoni* *S. japonicum*	1	
Part III :		
General consideration: *Ascaris lumbrcoides* *Enterobius vermicularis*	3	Dr.Rasha

3-Nematodes: *Trichuris trichiuria* *Trichostrongylus* *Strongloides stercoralis* *Ancylostoma duodenale* *Necator americanus* Cutaneous and visceral larva migrant *Trichinella spiralis* The filariae : – *Wuchereria bancrofti* – *Brugia malayia* – *Mansonella perstans* – *M. ozzardi* - *Onchocerca volvulus* – *loa loa* – *Drancuncolus medinensis*	17 hrs.	Dr. Majid shayal Panikers. Textbook of Medical parasitology. Rivised and EDITED BY SOUGATA GHOSH. 2018. -2Medical Parasitology. A textbook. Rohmud. Yuonne Ailian Lim.... Springer
Part IV : Medical Entomology	8	Dr. Rasha

Note : the following point will be discussed for each parasites mentioned above , geographical distribution , morphology , biological and life cycle , pathogenesis and symptoms , treatment, Epidemiology , control , diagnosis

Practical parasitology

Lab. No.	No. of Weeks	Lecturer
Introduction and methods used for parasitic diseases diagnosis	1	Dr. Rasha K. Abd-Jaliel & Zineb Mohmad
Entamoeba of man *:* *E. histolytica* , vegetative or trophozoite Year and cyst Year , *E. coli* , trophozoite Year and cyst Year	1	1-Textbook of MEDICAL PARASITOLOGY
Endolimax nana : cyst Year , *Iodamoeba butschlii* : cyst Year , *Blastocystis hominis* : trophozoite Year	1	
Giardia lambelia : trophozoite Year and cyst Year	1	
Chilomastix mesnili : cyst Year , *Blastocysitis hominis* : trophozoite Year	2	
T. vaginalis : trophozoite Year	1	
B – Blood & tissues flagellated , intestinal and urogenital flagellates : 1 - Leishmania bodes (amastigote Year) 2 – Leptomonad form (promastigote Year) 3 – Crithidial form (epimastigote Year) 4 – *Trypanosoma gambiense* 5 – T . cruzi 6 – Ciliated : Balantidium coli	2	
Sporozoa (malarial parasites)		

1- Exoerythrocytic Year of plasmodium 2 – *P. vivax* (ring Year , trophozoite , schizont , gametocyte) .	1	
P. ovale (trophozoite , schizont). *P. malariae* (trophozoite , gametocyte) *P. falciparum* (ring , gametocyte)	2	
Toxoplasma gondii : trophozoite	1	
Cryptosporidium oocyst *Pneumocystis carini* cyst	1	
Sarcocystis (sarcocyst)	1	
Medical helminthology : Cestoda :		
Taenia saginata (scolex , gravid segment ,larval Year , cysticercus bovis) *T . solium* :(gravid segment ,larval Year , cysticercus bovis) . Mature segment of taenia , egg	2	
Hymenolepis nana : Adult parasite ; egg ; cysticercoids *H. diminuta* : Adult parasite ; egg	1	
Dipylidium caninum :adult parasite ; egg	1	
Diphylobothrium latum : adult parasite ; egg	1	
Echinococcus & hydatid diseases: *Mature adult , egg , hydatid sandand cyst in liver*	1	
Trematoda : liver flukes *Fasciola hepatica & F. gigantica* *Mature adult , egg , miracidium , redia , cercaria* *Lymnaea cailliaudi (snail intermediated host of fasciola spp)*	2	
Schistosoma haematobium *S. mansoni* *S. japonicum*	1	
Arthropoda :insect , flea , tick , lice Morphology , classification ; egg, larvae & adult	3	

Family and Community Medicine
Third Year

1.1 Description of Community Medicine for medical students focuses on the health of populations rather than just individuals. It emphasizes the social, economic, and environmental factors affecting health and aims to equip students with skills to address public health challenges.

Key components include:

1. **Understanding Health Disparities**
2. **Public Health Principles**
3. **Preventive Care**
4. **Interdisciplinary Collaboration**:
5. **Research and Advocacy**

1.2 Vision of community medicine

The vision of community medicine in medical students encompasses several key elements aimed at transforming their approach to healthcare:

1. **Holistic Health Perspective**: Students view health as a product of various factors—social, economic, cultural, and environmental—beyond clinical symptoms.
2. **Community-Centered Care**: Future physicians prioritize community engagement, recognizing the importance of understanding local needs and resources to provide effective care.
3. **Preventive Focus**: There's an emphasis on prevention and health promotion, encouraging students to think proactively about community health and disease prevention strategies.
4. **Interprofessional Collaboration**: Students learn the value of working with diverse professionals and community organizations to tackle complex health issues collaboratively.
5. **Lifelong Learning and Adaptability**: They embrace continuous learning and adaptability to evolving community health challenges, utilizing research and data to inform their practice.

1.3 Mission of community medicine

The mission of community medicine in medical students can be summarized through several core objectives:

1. **Promote Health Equity**: Foster an understanding of health disparities and commit to addressing social determinants of health to ensure equitable access to care for all populations.
2. **Enhance Community Engagement**: Encourage active participation in community health initiatives,
3. **Cultivate Preventive Care Practices**:
4. **Develop Interprofessional Skills**: Prepare students to work collaboratively with various healthcare and community professionals, emphasizing the importance of a multidisciplinary approach to health issues.
5. **Encourage Research and Data-Driven Decision Making**: Promote the importance of evidence-based practices by engaging students in research and the analysis of community health data to inform public health interventions.
6. **Empower and Educate Communities**: Equip students with the tools to educate individuals and communities about health issues, encouraging self-management and informed decision-making regarding health.

1.4 Goal of community medicine

The goals of community medicine for medical students can be outlined as follows:

1. **Understanding Social Determinants of Health**
2. **Promoting Preventive Health Practices**
3. **Enhancing Community Engagement Skills**
4. **Building Interprofessional Relationships** .
5. **Fostering Cultural Competence**: Prepare students to deliver culturally sensitive care by understanding diverse perspectives and practices within various communities.

1.5 References of community medicine

1. **Books**:
    - Park, K. (2023) Parks Textbook of Preventive and Social Medicine. 19th Edition, M/S Banarsidas Bhanot Publishers, Jabalpur, 798-806. medicine principles and practices.

- Public Health & Preventive Medicine. Wallace/Maxcy-Rosenau-Last. Robert B. Wallace, MD, MSc, Copyright © 2008 by The McGraw-Hill Companies,
- Review of Preventive & Social Medicine (Including Biostatistics);15th Edition 2023 by Vivek Jain

2. **Journals**:
   - *American Journal of Public Health* – Publishes research and commentary on public health topics, including community health initiatives.
   - *Journal of Community Health* – Focuses on community health research, policy, and practice.
3. **Online Resources**:
   - **World Health Organization (WHO)**: The WHO website offers a wealth of information on global health issues, community health strategies, and health promotion.
   - **Centers for Disease Control and Prevention (CDC)**: Provides guidelines, data, and resources for public health practice, including community health programs.
4. **Research Articles**:

1.6 Assessment methods of medical students in community health

Assessment Method	Description
1. Written Examinations	
✓ • Multiple-Choice Questions (MCQs)	Tests knowledge of key concepts in community health and public health principles.
✓ • Short Answer Questions	Evaluates critical thinking and understanding of community health issues.
2. Practical Assessments	
✓ • Health Promotion Activities	Assesses planning and implementation of community health initiatives (e.g., workshops, campaigns).
3. Simulation-Based Assessments	
✓ • Role-Playing	Simulates interactions with patients or community members to assess communication and cultural competence.

1.7. Student assessment

The minimum requirement of a student to be transferred to fourth year is to achieve at least 50% of the total 100 marks assigned for the course.

The marks are distributed as follows:

Assessment Component	Marks	Description
First Term (Continuous Assessment)	10 marks	- Based on daily continuous assessment using an approved checklist.
		- Includes short written examinations (quizzes).

Mid-Year Written Examination	20 marks	- A written examination conducted midway through the course.
Second Term (Written Exam)	10 marks	- One written examination near the end of the term.
Final Examinations	60 marks	- **Part 1:** Comprehensive written exam with various question types:
		- Multiple-Choice Questions (MCQs)
		- Matching questions
		- Short answer questions
		- Problems requiring mathematical calculations
		- **Part 2:** (If applicable, specify any practical or oral components).
Total	**100 marks**	

Students who fail to attain the 50% cut-off mark are required to re-sit in September for a comprehensive examinations similar to the final one (written and oral). Failing in the re-sit examination entails the student to repeat the academic year.

1.8 Distribution marks of community medicine in medical faculty

Assessment Component	Marks Distribution	Notes
First Course Exam	10%	Conducted during the first part of the academic term.
Mid-Term Exam	20%	Evaluates progress midway through the term.
Second Course Exam	10%	Conducted during the second part of the academic term.
Total Continuous Assessment	**40%**	Sum of First Course, Mid-Term, and Second Course marks.
Final Exam	60%	Comprehensive exam covering the entire syllabus.
Final Total Marks	**100%**	Combined score of continuous assessment (40%) + final exam (60%).

1.10 Scientific teaching methods in community medicine

Scientific teaching methods in community medicine focus on evidence-based practices that enhance learning and community health outcomes. Here are some key methods:

1. **Problem-Based Learning (PBL)**:
2. **Flipped Classroom**: In this model, students engage with instructional content (e.g., videos, readings) outside of class, allowing for more interactive and applied learning during class time, such as discussions or problem-solving activities.
3. **Health Promotion Campaigns**: Engaging students in designing and implementing health promotion initiatives allows them to apply theoretical knowledge in practical settings,

1.11 Outcomes of learning in community medicine

Outcomes of learning in community medicine for medical students can be categorized into several key areas:

1. Knowledge Acquisition

- **Understanding Health Systems**: Students gain a comprehensive understanding of public health principles, healthcare policies, and the social determinants of health.
- **Epidemiology and Biostatistics**: Improved ability to interpret health data and apply epidemiological principles to community health issues.

2. Skill Development

- **Clinical Skills**: Enhanced ability to conduct health assessments, screenings, and community health interventions.
- **Communication Skills**: Improved ability to communicate effectively with diverse populations and engage with community members.

3. Critical Thinking and Problem-Solving

4. Cultural Competence

- **Sensitivity to Diversity**: Greater awareness and appreciation for cultural differences, leading to more effective and respectful patient interactions.
- **Community Engagement**: Ability to engage with and empower community members from various backgrounds.

5. Professionalism and Ethics

- **Commitment to Advocacy**: Development of a strong sense of responsibility to advocate for vulnerable populations and address health disparities.

- **Ethical Practice**: Understanding ethical issues in community health and the importance of integrity in public health work.

1.12. Administration and faculty

- Dr. Hmood Madhi Hasan (FICMS/CM)/ Head of the Department
- Dr. Mohammed Mahdi Khallawi (BSc. Micro. HD. MLT. PhD.)/ Rapporteur of the department

The faculty members

1. Mohammed Mahdi Khallawi (Ph.D. Medical Microbiology/Virology)
2. Dr. Salam Abdulla Khalaf (M.D family medicine)
3. Dr. Hala Tahir (M.D family medicine)
4. Samah Abdulhamed (M.D family medicine)

Seats of lectures introduction

When introducing a lecture on community medicine, it's essential to create an engaging environment that sets the tone for the topic. Here are some effective places and settings for such an introduction:

1. **Faculty Lecture Halls**
2. **Community Health Centers**
3. **Medical faculty Libraries**:
4. **Conference Rooms in Health Organizations**
5. **Workshops or Retreats**

1.13. Objectives

Course Objectives: Medical Statistics & Public Health Nutrition

Section A: Medical Statistics

1. Define the role and main uses of statistics in medical research and practice.
2. Summarize and present raw biological data using appropriate methods and visualizations.
3. Utilize frequency distributions to describe and interpret datasets.
4. Differentiate between normal (Gaussian) and skewed distributions.
5. Calculate and interpret measures of central tendency (mean, median, mode) and variability (standard deviation, standard error).
6. Apply the standard error to calculate 95% confidence intervals for population estimates.
7. Distinguish between the applications of standard deviation (describing data spread) and standard error (estimating precision of a mean).
8. Select and perform appropriate statistical tests to determine the significance of differences in qualitative and quantitative data.
9. Correctly interpret p-values (e.g., $p<0.05$) and statements of statistical significance in medical literature.

Section B: Public Health Nutrition

Upon completion, the student will be able to:

10. Explain the primary metabolic pathways for major dietary components (carbohydrates, proteins, lipids).
11. Define the essential requirements for major human nutrients.
12. Explain the specific nutrient needs of special population groups (e.g., pregnant women).
13. Describe the bidirectional relationship between infection and an individual's nutritional status.
14. List and describe the main methodologies for assessing the nutritional status of a population.
15. Identify and define major nutritional deficiency and excess diseases.

1.14. Syllabus

The course consists of 30 theoretical hours and 30 practical hours. The details are shown in Table 1 below:

Table 1: detailed topics of community medicine to third year medical students

Term and main subject	Topics	Hrs

First Term: Medical Statistics	Introduction to medical statistics	1
	Summarization and presentation of data	2
	Measurement of central location	1
	Measurement of variability	1
	Introduction to sampling	2
	The normal distribution and its characteristics	1
	The confidence interval and limit	1
	Tests of significance: ►the Z test ►the t test ►the X^2 test	3
	The concept of community diagnosis as an application of statistics in measuring population health	3
Sub-total		15
Second Term: Public health nutrition		
	Definition of relevant terms	1
	Nutrient metabolism and requirements	3
	Nutrition and infection	1
	Nutrition of specific groups of population	2
	Nutritional surveys and assessment of nutritional status of population	2
	Selected Nutritional diseases	3
	Diet therapy and nutritional rehabilitation	3
Sub-total		15
Grand-total		**30**

Practical: This consists of class-based desk exercise sessions, two hours each. The classes are run as one session per week for the 15 weeks during the first term. Students are divided into groups of 10-15 students each> Each group is assigned a tutor from the department faculty. the tutors are rotating on groups to interchange expertise and experience and to reduce interpersonal variation in assessing the students

No practical classes are organized during the second term but a demonstration exercise may be arranged.

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Subject: General Surgery

Third Year

✪ Teaching Curriculum

- The main role of the department of surgery is teaching surgery for attainment of M.B.Ch.B.
- Medical education of surgical science is started in the 3rd year and continue through 4th, 5th and 6th year. Students attend lectures and clinical sessions in the wards and clinics related to the subjects they are studying.
- Students in 6th Year should attend surgical theatre, surgical day ward, ward rounds, case conferences.

❑ Third Year Curriculum

عدد ساعات المقرر الدراسي: الفصل الأول و الثاني: نظري= 30 ساعة

❖ Key Topics in General Surgery:

➢ General principles lectures

1. Introduction and history of surgery
2. Wounds, types, wounds healing and tissue repair, scars
3. Surgical infection and specific infections
4. Fluid and electrolyte balance
5. Acid–base balance
6. Sterilization and disinfection
7. Surgical nutrition and metabolism
8. Shock
9. Hemorrhage and blood transfusion
10. Management of major trauma and multiple injured patient
11. Principles of oncology
12. Skin and subcutaneous tissue
13. Ulcers, cysts, sinuses and fistulae
14. Management of Burns
15. Basic surgical skills
16. Pre and postoperative management of surgical patient
17. Perioperative management of the high risk surgical patient
18. Diagnostic imaging in surgery
19. Endocrine and Metabolic response to trauma
20. Principles of laparoscopic surgery
21. Principles of transplantation

Subject: Internal Medicine

Third Year

Department of Internal Medicine

1.1 Definition

The Department of Internal Medicine is a cornerstone of the College of Medicine, playing a pivotal role in shaping future physicians. It equips students with comprehensive knowledge and practical skills in disease diagnosis, treatment protocols, and epidemic management. The department is committed to producing highly qualified medical graduate who contribute effectively to healthcare institutions. The other scientific departments serve as tributaries that converge into the broader stream of Internal Medicine, collectively forming the foundational channel through which the medical profession is enriched with essential knowledge and expertise.

Established alongside the College of Medicine in 2008–2009, the department's responsibilities expand as students advance through their third to sixth academic years.

Key functions include:

- Delivering structured theoretical lectures aligned with the Internal Medicine curriculum.
- Providing hands-on clinical training following a meticulously designed departmental schedule.
- Developing examination materials for mid-term, semester-end, and final assessments.
- Administering clinical evaluations for fourth- and sixth-year students post-training, including comprehensive final clinical exams for graduating students.
- Enhancing professional development through active participation in continuing education initiatives, such as lectures and scientific seminars.
- Overseeing graduate research projects and fostering academic contributions through faculty-led research publications.
- Collaboration with teaching hospitals and regional health authorities to address local health burdens.

Future Goals

Looking ahead, the Department of Internal Medicine aims to:

- Enhance Clinical Training – Partner with leading hospitals to offer students exposure to diverse medical cases and cutting-edge treatment methodologies.
- Upgrade Facilities – Modernize teaching and clinical spaces with state-of-the-art equipment to support both education and patient care.
- Promote Community Health – Organize outreach programs to address prevalent health issues in the region, reinforcing the department's commitment to public service.

1.2. Department setting

The Department of internal Medicine is one of eleven academic departments operating in The Medical College, University of Misan. It consists of Department Head Office, Secretariat, and Faculty members. The policy and duties of the department are the responsibility of the Department Council which delegates part of its authorities to the head of the department. A number of scientific and administrative committees are assigned the responsibility of specific areas of interest to the department (scientific committee, examination committee, are examples). Teaching and assessment tasks are discussed and approved by the department council which also endorses the achievements of faculty. Students' performance and examination results are endorsed by the department council before they are submitted to the college administration.

From structure point of view, the department within the structure of the building of College of Medicine, the department makes use of all common lecture halls at the disposal of the college & teaching hospital.

The Department of Internal Medicine comprises the following distinguished faculty members:

No.	Name	Position	Specialization
1	A. Prof. Dr. Omer Mansib Kassid	Head of Department	Internal Medicine
2	L. Dr. Barakat Hasan Obeid	Coordinator	Internal Medicine
3	Prof. Dr. Ridha Alwan Hasan	Dean of the College	Internal Medicine
4	Prof. Dr. Haider Saadoon Qasim	Assistant Dean	Internal Medicine (Oncology)
5	A. Prof. Dr. Abbas Kinbar Kusar	Faculty Member	Neurology
6	L. Dr. Jabbar Jassim Atiyah	Faculty Member	Internal Medicine
7	L. Dr. Mueid Baher Kazem	Faculty Member	Internal Medicine
8	L. Dr. Surar Osama Taha	Faculty Member	Dermatology
9	L. Dr. Rend Hussein	Faculty Member	Dermatology

Collaborative Teaching Model: To address faculty shortages and ensure un-interrupted delivery of the Internal Medicine curriculum, the department collaborates with specialist physicians from the Misan Health Directorate. These clinicians contribute significantly to lecture delivery and clinical training. Additionally, departmental faculty provide instructional support to other medical colleges (e.g., Pharmacy, Dentistry) when required.

Clinical Commitment: Despite heavy workloads and limited staffing, faculty members maintain full clinical responsibilities at the teaching hospital, including:

- ○ On-call duties
- ○ Specialty clinic consultations
- ○ Patients rounds
- ○ Other hospital obligations commensurate with Ministry of Health specialists

This structure ensures the department fulfills its dual mission of academic excellence and patient care.

1.3. Mission

To cultivate highly competent physicians with comprehensive knowledge and clinical skills in Internal Medicine, enabling them to deliver safe and effective patient care in hospital settings.

1.4. Vision

To establish our department as a center of excellence by developing robust postgraduate programs in Internal Medicine, conducting priority-driven research addressing the province's prevalent health challenges, and actively contributing to the formulation of evidence-based health policies within our scope of practice.

Strategic Objectives (Goals)

- Ensure the full delivery of theoretical and practical training to students.
- Refine examination methodologies to serve as dual tools for evaluation and active learning.
- Achieve optimal staffing levels in Internal Medicine specialties to enhance clinical and bedside training.
- Collaborate with partner hospitals to implement standardized assessments for evaluating graduate readiness.

1.5. References for Internal Medicine

1.5.1. Books

1.5.1.1. Davidson's Clinical Medicine

1.5.1.2. Harrison's Principles of Internal Medicine

1.5.1.3. Macleod's Clinical Examination

1.5.2. Journals

1.5.1.1. New England Journal of Medicine (NEJM)

1.5.1.2. Lancet

1.5.3. Websites

1.4.3.1. www.uptodate.com

1.4.3.2. www.medscape.com

1.4.3.3. www.bmj.com

1.6. Assessment methods of medical students in community health

1.6.1.Assessment methods

Assessment Method Description

1. Written Examinations

1. Multiple-Choice Questions (MCQs)
   Tests knowledge of key concepts in community health and public health principles.
2. Matching questions
   Evaluates critical thinking and understanding of community health issues.
3. Short Answer Questions
   Evaluate critical thinking and understanding of community health issues.
4. Case (problem) solving

2. Practical Assessments

- Clinical examination and OSCE assessment
  Test core practical skill and their ability to identifying clinical pathology and diagnosing common disorders

3. Simulation-Based Assessments

- Role-Playing
  Simulates interactions with patients or community members to assess communication and cultural competence.

1.6.2. Student assessment

The minimum requirement of a student to be transferred to next Year is to achieve at least 50% of the total 100 marks assigned for the course.

○ **The marks are distributed as follows (for the 3rd, 4th and 5th year)**

Assessment Component	Marks Distribution	Notes
First Semester	10%	Conducted during the first part of the academic term.
Mid-Term Exam	20%	Evaluates progress midway through the term.
Second Semester	10%	Conducted during the second part of the academic term.
Total mark till final exam.	40%	Sum of Mid-Term First, and Second Semester marks.
Final Examination (including clinical examination if present)	60%	Comprehensive exam covering the entire syllabus.
Final Total Marks	100%	Combined score of continuous assessment (40(40

1.7. Scientific teaching methods in department of internal medicine

The Department of Internal Medicine employs evidence-based teaching methodologies designed to:

- ○ Optimize student learning outcomes
- ○ Bridge theoretical knowledge with clinical practice

- ○ Address current community health priorities

Key Instructional Approaches Include:

- ○ Case-Based Learning (CBL)

1. Analysis of real patient cases to develop diagnostic reasoning
2. Small-group discussions fostering critical thinking

- ○ Problem-Based Learning (PBL)

1. Student-centered exploration of clinical scenarios
2. Emphasis on self-directed learning and resource utilization

- ○ Bedside Teaching Rounds

1. Direct patient interaction under faculty supervision
2. Focus on history-taking and physical examination techniques

- ○ Evidence-Based Medicine (EBM) Workshops

1. Training in critical appraisal of medical literature
2. Application of research findings to clinical decision-making

1.8. Outcomes of learning in community medicine for medical students can be categorized into several key areas:

1. **Knowledge Acquisition**

- Mastery of Disease Mechanisms: Deep understanding of pathophysiology, diagnostics, and evidence-based treatment protocols for internal medicine conditions.
- Health Systems Integration: Knowledge of hospital workflows, healthcare policies, and the socioeconomic factors influencing chronic disease management.

2. **Skill Development**

- Clinical Proficiency: Expertise in physical examinations, supervised procedural skills
- Interdisciplinary Communication: Ability to collaborate effectively with specialists, nurses, and allied health professionals in complex care settings.

3. **Critical Thinking and Problem-Solving**

- Diagnostic Reasoning: Skill in synthesizing patient history, labs, and imaging to formulate differential diagnoses.
- Evidence-Based Decision-Making: Application of current guidelines and research to individualize patient care plans.

4. **Cultural Competence**

- Patient-Centered Care: Sensitivity to cultural, religious, and socioeconomic factors affecting treatment adherence and outcomes.
- Health Equity Advocacy: Recognition of disparities in access to care for conditions like diabetes or hypertension, with strategies to mitigate them.

5. **Professionalism and Ethics**

- Ethical Practice: Adherence to principles in end-of-life care, informed consent, and resource allocation (e.g., ICU triage).
- Leadership in Healthcare: Commitment to mentoring, quality improvement initiatives, and systemic advocacy for patient safety.

Part two

Scientific courses for medical student in internal medicine department

2.1. Broad Objectives for Undergraduate Internal Medicine

1. Acquire core understanding of pathophysiology, diagnosis, and management of major internal medicine conditions (e.g., cardiovascular, respiratory, endocrine diseases).
2. Comprehend the role of internal medicine within healthcare systems, including hospital-based and outpatient care models.
3. Develop proficiency in interpreting diagnostic tests (e.g., lab results, imaging, ECGs) and applying evidence-based treatment protocols.
4. Gain competency in managing acute and chronic diseases (e.g., diabetes, hypertension, COPD) at individual and population levels.
5. Learn preventive strategies and early intervention approaches for high-burden conditions.
6. Apply holistic care strategies, integrating psychosocial, cultural, and economic factors into treatment plans.
7. Build a foundation for residency training through advanced clinical rotations and subspecialty exposure (e.g., cardiology, gastroenterology).
8. Cultivate self-directed learning habits using digital resources (e.g., UpToDate, medical journals) and continuing medical education (CME).
9. Evaluated through: Clinical rotations, OSCEs, case presentations, and research projects.

Curriculum of Internal Medicine

Third Year

2.1.1. Introduction

Cause code: Med.CL3rd Med.Th.3rd	Course name: Internal medicine	Third year
General Medicine	Number of units: units	Theoretical lectures: 45 hr Clinical sessions: 60 hr

2.1.2. Methods of teaching

3	Chest pain	2
	○ Differential diagnosis and clinical differentiation	
	○ Diagnostic approach	
4	Cough, shortness of breath, cyanosis	1
5	Oedema and ascites	2
	○ Pathophysiology and causes of edema	
	○ Approach to patient with ascites	

- Theoretical lectures
- ○ Seminars and simulation for history taking and basic clinical skills
- ○ Small group teaching

2.1.3 Curriculum of the Department of Medicine – 3rd year

Third year Curriculum - (Total of 45 hours)

A. Introductory lectures 15 L
B. Nutritional disorders 9 L

C. Water, Electrolytes and acid-base Balance 9 L
D. Endemic and helminthic diseases 12 L

Total = 45 hours

6	Jaundice	1
7	Headache	1
8	Hematuria, frequency, dysuria	1
9	Abdominal pain, nausea vomiting, diarrhea	1

A- Introductory Lecture

This session establishes the core language of clinical medicine, distinguishing between a patient's subjective symptoms and a doctor's objective signs. It introduces the foundational principles of forming a differential diagnosis and the systematic approach to common patient complaints.

A- Introductory lecture

1	Introduction to clinical medicine	4
	○ Definition of signs and symptoms	
	○ Discussion the main diagnostic procedures	
	○ Approach to common symptoms	
2	Fever,	2
	○ Pathogenesis, types, causes	
	○ Pyrexia of unknown causes	

B- Nutritional disorders

These lectures establish clinical medicine's foundation, teaching how to interpret a patient's symptoms (like chest pain or cough) and signs (like fever or jaundice) to diagnose common conditions. You will learn a systematic approach for each symptom, from abdominal pain to headache, to build a differential diagnosis. This framework is essential for connecting patient complaints to potential underlying diseases in the respiratory, cardiovascular, gastrointestinal, urinary, and neurological systems.

B. Nutritional disorders

No.	Condition	Hrs.
1	Malnutrition, manifestations, types and management	2
2	Medical diets, obesity	2
3	Vitamins	

	• Vit. A. Deficiency and hypervitaminosis	1
	• Vit. D. Rickets, osteoporosis, Osteomalacia	1
	• Vit. K.E.C.	1
	• Vitamin B- complex, Folic acid	1
4	Mineral deficiency	1

C- Disturbances in water, electrolyte and H concentration

This series explores the critical balance of water, electrolytes, and acid-base levels in the body. You will learn the physiological principles governing fluid compartments and then investigate key disorders: the dangers of both water loss and overload, imbalances of essential ions like sodium and potassium, and disturbances in the body's pH. The lectures cover the four primary acid-base imbalances, differentiating between metabolic and respiratory causes of acidosis and alkalosis.

C. Disturbances in water, electrolyte and H concentration

No.	Condition	Hrs.
1	Total body water, physiological considerations	2
2	Primary water depletion, water intoxication	1
3	Sodium depletion, sodium and water accumulation	2
4	Potassium depletion and excess - Magnesium depletion and excess	1
5	Disturbances in H-ion concentration: Metabolic acidosis and alkalosis	2
6	Respiratory acidosis and alkalosis	1

D- Infectious diseases

This course provides an overview of significant infectious diseases caused by diverse pathogens. You will study protozoan infections like malaria and amebiasis, fungal and parasitic conditions such as tinea and hydatid disease, and major helminthic (worm) infestations including schistosomiasis and various intestinal nematodes. The lectures also cover critical bacterial illnesses like cholera and plague, and important viral infections such as dengue, offering a foundational knowledge of their clinical importance and the spectrum of infectious agents.

D. Infectious diseases	Hrs.
1 Malaria	2

2 Amebiasis, Giardiasis	1
3 Tinea, Hydatid diseases	1
4 Schistosomiasis, Toxoplasmosis	2
5 Ankylostomiasis, Ascariasis, Oxyuriasis, Taeniasis, Trichuriasis	2
6 Trichinosis, Strongyloidiasis	1
7 Cholera	1
8 Sandfly, Dengue, Flaque	1
9 Leprosy	1

2.1.4.The Clinical Course for the 3rd Grade of Medical School

This course provides the essential foundation of clinical medicine: mastering the patient interview. You will learn the comprehensive structure of history taking, from the chief complaint to past and social histories. The curriculum then focuses on applying this skill to investigate critical symptoms like chest pain, fever, and shortness of breath, using a systematic approach to build a differential diagnosis for each major body system and common clinical presentation.

The Clinical Course For The 3rd Grade Of Medical School
1 Introduction to history taking
○ What is history taking, chief complaint, and history of presenting illnesses? 2
○ Past medical, surgical, drug, family and social history 2
2 Review Of Systems and Definition of Symptoms
○ Cardiovascular, Respiratory, And Genitourinary Systems 2
○ GIT, Neurological and Musculoskeletal Systems 2
3 Chest pain 2
4 Abdominal pain 2
5 Shortness of breath 2
6 Fever 2
7 Jaundice 2
8 Diarrhea 2
9 Wight loss 2
10 Hematemesis 2
11 Abnormal body movement 2

Education program

Fourth Year

Subject: Community Health

Fourth Year

1.1. description

The bulk of the principles and methods of Community Medicine is taught during the fourth year of medical program. The 4th year course consists of 95 theoretical hours and 120 hours of practical classes and field work.

The theoretical subjects are given in Tables 2-9.

1.2. Objectives

The course is designed to enable the student to:

1. Interpret the distribution of disease in a population in terms of person, place and time.
2. Describe the components of a rate, ratio and proportion
3. List, define and compute common rates used to measure fertility, morbidity and mortality in community.
4. Define, absolute risk, relative risk and attributable risk. Interpret their use in epidemiological situations.
5. Distinguish between association and causation and list causal criteria.
6. Describe major epidemiological studies (cross-sectional, longitudinal, case-control and cohort).
7. Make a simple design of an epidemiological study to describe the distribution of disease in population.
8. Make a simple design of an epidemiological study to identify risk factors for a given disease
9. Analyze and interpret results obtained from relevant epidemiological studies.
10. Define sensitivity, specificity and predictive values and compute these measures given the necessary data.
11. Define epidemic, endemic and pandemic and list the steps of investigating and managing an epidemic of a communicable disease
12. Identify the major communicable diseases prevalent in Iraq.
13. Demonstrate the main epidemiological features, specific preventive measures and control measures of common communicable diseases in Iraq.
14. Promptly respond to crises associated with threats of communicable diseases spread.
15. Describe the main epidemiological features, risk factors and preventive measures of major non-communicable diseases (CHD, DM, Cancer, Accidents).
16. Appreciate the role of primary health care approach in dealing with mental health

17. Recognize the principles of planning, management of evaluation of health care programmes in a given setting.
18. Define environmental health and list its main concerns
19. List major risks associated with environmental exposures
20. Describe major effects of work on health
21. Recall major occupational disease
22. List major groups of carcinogens with special reference to the situation in Iraq.
23. Appreciate the role of social and cultural factors in health and disease.

1.3. Syllabus

First Term

Total hours:

Theory: 45

Practical: 60

Table 2: General epidemiology

Topics	Hrs.
Introduction : concept of health and disease, definition of epidemiology, epidemiological uses and approaches	2
Epidemiological data: types, sources and limitations	1
Epidemiological measurements : rates, proportions and ratios	2
Descriptive epidemiology: person, place and time	2
Descriptive epidemiological studies: Cross-sectional, Longitudinal, Case control, Cohort, Interventional	1
The concept of association, causation, risk	1
Analytical epidemiological studies	2
Screening and quality control of screening and diagnostic tests- clinical epidemiology	2
Designing epidemiological studies	1
The concept and investigation of epidemic	1
Total	15

Table 3: Epidemiology and control of communicable diseases(30 hrs).

Topics	Hrs
-DEFINITION OF TERMS	**1**
-INFECTIONS ACQUIRED THROUGH THE GASTROINTESTINAL TRACT:	**7**
• Diarrhoeal diseases: extent of the problem, causes, risk factors and control	1
• Comparative epidemiology of rotavirus, salmonella, cholera and shigellosis	1
• Amoebiasis and shigellosis	1

• Bacterial food poisoning	1
• Poliomyelitis	1
• Infections hepatitis A	1
• Typhoid and paratyphoid fever	1
- INFECTIONS ACQUIRED THROUGH THE RESPIRATORY SYSTEM (AIR BORNE INFECTIONS):	**10**
• Acute respiratory infection (ARI): extent, causes, risk factors and strategies of control of ARI	2
• Exanthematous infection: Measles, German measles, chicken pox…etc	2
• Mouth and throat infection: Diphtheria, mumps, and tonsillitis	2
• Whooping cough	1
• Tuberculosis	1
• Leprosy	1
• Acute bacterial meningitis	1
- PERCUTANEOUS INFECTION: INFECTIONS ACQUIRED THROUGH TE SKIN	8
• Insect bites: malaria, leishmaniasis, rickettsia	2
• Abrasions: anthrax	1
• Animal bites, rabies	1
• Wounds: tetanus	1
• Injections: hepatitis B, AIDS	1
• Pentration: Schistosomiasis, hookworm	1
• **-SEXUALLY TRANSMITTED DISEASES**	**2**
• **- ZOONOTIC INFECTIONS**	**2**
• **- NOSOCOMIAL INFECTIONS AND TRAVELLER HEALTH**	**1**
TOTAL	31

The practical in the first term consists of epidemiological desk exercises. These are quantitative practical classes handling specific epidemiological issues covering demographic, vital and health topics. Fourth year students are divided into subgroups of 10-15 students each. The groups are supervised by faculty members in rotation. Exercises are designed to further develop the knowledge and skills in

Second Term: Theory 45 hours Practical 60 hours

Table 4: Epidemiology and control of non-communicable diseases(10 hrs.)

Topics	Hrs.
• Epidemiology of ischemic heart diseases	2
• Epidemiology of diabetes mellitus	2
• Epidemiology of cancer	2
• Epidemiology of accidents	2

• Epidemiology of mental health and geriatrics	2

Table 5: Maternal and child health care (15 hours)

Topics	HRS
Maternal Health 7 hours	
• Introduction to MCH care	1
• Components of MCH care	2
• Nutrition during pregnancy	1
• Infection during pregnancy	1
• Low birth weight and prematurity	1
Evaluation of MCH care	1
Health care for children 5 hours	
• under five clinics	1
• growth monitoring	1
• Immunization	1
• Development clinics	1
• care for handicapped children	1
• **School health services : concept and plans**	2
• **Vital statistics in MCH care**	1

Table 6: Environmental health (5 hours)

Topics	Hrs
Definition of health and disease within the context of environment, and environmental health	1
Basic activities of environmental health	
Water : sources , quality and related diseases	1
Air : sources of pollution, health effects and control of air pollution	1
Toxicology: Common environmental problems	2

Table 7: Occupational health (5 hours)

Topics	HRS
Definition of occupational health	1
Objectives of occupational health services	
Health hazards associated with work	1
Health hazards to the environment and community which result from industrial activities	1
Safety measures in occupation	1

Selected occupational diseases	1

Table 8: Primary health care (PHC) in Iraq (5 hours)

Topics	Hrs
Limitation of the hospital model/Justifications for PHC	1
Definition, contents and difficulties of PHC/ Supportive programmers/ The five star doctor	2
National PHC programmes: EPI, CDD	1
National PHC programmes: ARI, MCH, Breast feeding	1

Table 9: Health care administration (5 hours)

Topics	Hrs
Brief historical view of Iraq health system	1
Concept of administration	1
Planning of health care services	1
Evaluation of health care services	2

Second term: practical (60 hours)

These are based on field projects which cover real health and health related problems through household surveys and institutional-based studies in which students use the theoretical knowledge in designing, conducting, analysis and presentation of their results.

1.4Assessment

Assessment Component	Description	Weight
First Term	Based on discussions, desk exercises, short written exams (quizzes), and presentations.	10%
Mid-Year	One paper with at least four question types (short answer, MCQ, problems, matching, statement completion, etc.).	20%
Second Term	Small-group project planned, conducted, and presented under faculty supervision. Students are assessed individually and as a group.	10%
Final Examination	Written part similar to mid-year exam but covering all topics taught during the academic year.	50%
Oral Interview	Individual oral interview by a committee of 2–3 faculty members using a card-based question system.	10%
Total	Overall assessment for the academic year.	100%
Passing Requirement	Minimum 50% of total marks required to pass the year.	

Re-sit Examination	If a student fails, a re-sit exam is held in September. Failure in the re-sit requires repeating the academic year.	

Subject: Internal Medicine

4th Year

2.2.1. Introduction

Couse code: Med.CL.4th

Course name: Internal medicine

Fourth year

Theoretical lectures: 120

Number of units: 12 unit

General Medicine

Clinical sessions: 120 hrs.

2.2.2. Methods of teaching

- Theoretical lectures in the college building halls
- History taking and complete clinical examination on real patients in the hospital wards
- Small group teaching

2.2.3. Curriculum of the fourth year

A. Infectious diseases

B. Cardiovascular diseases

C. Gastrointestinal and liver diseases

D. Respiratory diseases

E. Endocrine and metabolic disorders

Subject/Activity	Number of Hours	Responsible / Lecturer	Type of Lecture
Shared	15 hours	All Instructors	Theory / Practical
Unspecified	30 hours	Dr. Barakat Hassan Obeid	Theory / Practical
Unspecified	30 hours	Dr. Jabbar Jamsim	Practical
Unspecified	25 hours	Prof. Dr. Redha Alwan Hassan	Theory / Practical
Unspecified	20 hours	Assoc. Prof. Dr. Omar Mansab	Theory / Practical

A- Infectious diseases

This course delves into advanced systemic infections, moving beyond common illnesses to complex bacterial diseases like typhoid, brucellosis, and tetanus. It covers critical topics including septic shock, food poisoning, and significant viral infections such as HIV and hemorrhagic fevers. The series also explores fungal pathogens and culminates with the diagnostic challenge of Pyrexia of Unknown Origin, refining your approach to fever without an obvious source.

1	Salmonellosis (Enteric fevers)	2
2	Bacillary dysentery	1
3	Brucellosis	1
4	Anthrax, Tetanus	1
5	Septic shock syndrome	1
6	Food poisoning	1
7	Viral infections:	
	• Human immunodeficiency virus (HIV)	2
	• Cytomegalovirus infections	1
8	Infectious mononucleosis, hemorrhagic fevers	2
9	Leptospirosis, Relapsing fever, Fungal infections	2
10	Pyrexia of unknown origin	1

B- Cardiovascular diseases

This course provides a comprehensive study of cardiovascular diseases, beginning with core physiology and clinical assessment. You will explore essential diagnostic tools, from ECGs to cardiac catheterization. The curriculum covers the spectrum of heart disease, including valvular disorders, congenital defects, hypertension, ischemic heart disease, arrhythmias, and heart failure. It also addresses specific conditions like pericarditis, cardiomyopathies, and the

management of cardiac issues in pregnancy, concluding with principles of cardiovascular disease prevention.

B. Cardiovascular diseases:

Dr. Barakat Hassan Obeid

No.	Topic	Hrs.
1	Introduction and physiological aspects	1
2	Clinical approach to a patient with CVD (Including prescribing basic diagnostic tests)	2
3	Non-invasive cardiovascular investigations (Echocardiography, electrocardiography, and other imaging tests)	1
4	Cardiac catheterization (Including indications, contraindications, and complications)	1
5	Rheumatic fever	1
6	Valvular heart diseases (Mitral, aortic, pulmonary, and tricuspid valve diseases)	2
7	Bacterial endocarditis	1
8	Congenital heart diseases (Cyanotic and acyanotic congenital heart diseases)	2
9	Systemic hypertension	2
10	Ischemic heart disease	3
11	Cardiac arrhythmias	2
12	Electrocardiography	2
13	Heart failure, Cor pulmonale	2
14	Diseases of the pericardium	2
15	Cardiomyopathy and myocarditis	2
16	Peripheral circulatory failure	1
17	Pregnancy and heart disease	1
18	Prevention of cardiovascular disease	1

C- Gastroenterology and liver diseases

This course offers a complete overview of gastroenterology and hepatology. It begins with the core symptoms and diagnostic investigations for GI tract disorders. You will then study diseases affecting the entire digestive system, from the esophagus and stomach (like peptic ulcers) to the intestines (including inflammatory bowel disease and tumors). A major focus is on liver and biliary health, covering jaundice, hepatitis, cirrhosis, liver failure, and the

principles of transplantation, concluding with pancreatic conditions like acute and chronic pancreatitis.

Gastroenterology and liver diseases	1
Symptoms of G.I. diseases	2
Investigations of the G.I. diseases	3
The esophagus, physiological consideration, dysphagia, esophagitis, hiatus hernia, achalasia, tumors.	4
Stomach – physiological consideration – gastritis	5
Peptic ulceration	6
G.I. Bleeding	7
Tumours of the stomach	8
Malabsorption syndrome	9
Ischemia and tumors of small bowel	10
Chronic inflammatory bowel diseases	11
Diverticular disease and irritable bowel syndrome	12
Ischemia of large bowel, angiodysplasia	13
Tumours of large bowel	14
The liver: bilirubin metabolism – types of jaundice	15
Investigation of liver diseases	16
Acute parenchymal liver disease – acute viral hepatitis	17
Acute fulminant hepatic failure	18
Portal hypertension	19

No.	Topic	Hrs.
19	Chronic liver disease	2
20	Drug-induced liver disease	1
21	Tumours of the liver: biliary system	1
22	Liver Transplantation	1
23	Bile acids – cholelithiasis - Non-surgical treatment of gall bladder stones	1
24	Pancreatic diseases: acute pancreatitis	1
25	Chronic pancreatitis	1

D- Respiratory System

This course provides a systematic study of respiratory system diseases, starting with foundational anatomy and physiology. It covers the common symptoms and essential diagnostic tools used in pulmonary medicine. You will explore a wide range of conditions, from common infections like pneumonia and tuberculosis to chronic diseases such as asthma, COPD, and occupational lung diseases. The curriculum also addresses critical topics including lung cancer, pleural disorders, respiratory failure, and acute syndromes like pulmonary embolism and ARDS.

D. Respiratory System	
1 Anatomical and physiological consideration	1
2 Common clinical manifestation of respiratory diseases	1
3 Investigations, and diagnostic procedures in respiratory diseases	2
4 Acute upper respiratory tract infection	1
5 Pneumonias	2
6 Supportative lung disease, bronchiectasis	1
7 Tuberculosis	3
8 Bronchial Asthma	2
9 Chronic bronchitis and emphysema	2
10 Pleural disease, Effusion	1

No.	Topic	Hrs.
11	Pneumothorax	1
12	Pneumoconiosis, Fibrosing alveolitis, honeycomb lung	1
13	Extrinsic allergic alveolitis	1
14	Bronchogenic carcinoma	2
15	Pulmonary embolism	1
16	Respiratory failure	1
17	Adult respiratory distress syndrome	1

E- Endocrine System

This course provides a comprehensive study of the endocrine system, beginning with the core neuroendocrine relationship. You will explore the function and dysfunction of major glands, including the thyroid, parathyroid, adrenal, and pituitary. A significant focus is placed on diabetes mellitus, covering its physiology, types, clinical management, and acute and chronic complications. The curriculum also addresses disorders of calcium metabolism, sexual health, infertility, and the management of hyperlipidemia.

E. Endocrine System	
1 Introduction - neuroendocrine relationship	1
2 Thyroid gland - hyperthyroidism	2
3 Thyroid gland - thyroiditis, hypothyroidism	1
4 Parathyroid glands - Calcium and Phosphate	1
5 Parathyroid glands - Hyperparathyroidism	1
6 Parathyroid glands - Hypoparathyroidism and tetany	1
7 Adrenal glands - physiology, gland overactivity	1
8 Adrenal glands - gland underactivity	1
9 Pituitary gland - introduction, gland overactivity	1
10 Pituitary gland - under activity	1
11 Pituitary tumors	1

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12 Endocrine pancreas – diabetes mellitus (etiology, types, physiology) 1
13 Endocrine pancreas – diabetes (clinical features, diagnosis, treatment) 2
14 Acute complication of diabetes mellitus 1
15 Long term complications of diabetes 2
16 Sexual disorder and infertility 2
17 Hyperlipidemia 2

2.2.4. Clinical Session

A. Clinical Session (8 weeks)	Week
1 History taking skills	1

2 General examination including vascular examination	1
3 Cardiac examination	2
Including inspection, palpation, auscultation	
4 Respiratory systems	2
Including inspection, palpation, percussion and auscultation	
5 Abdomen	2
Including inspection, palpation, percussion and auscultation	

Subject: Obstetrics

4th Year

Course Description

- The branch teaches obstetrics for the fourth academic Year by providing theoretical lectures, clinical training, and conducting daily exams.
- **Course Objectives:**
  - Strive to complete theoretical lectures and clinical training fully.
  - Diversify student assessment methods by varying exam styles.
  - Diligently work to complete the branch's quota of external lecturers to ensure diverse education and training for students.

1. **[Course Data]**

Course Code	Course Name: Obstetrics	Year: Fourth
OBGY405		
OBGY406		
Specialization: Obstetrics	Credit Hours: 6	Theoretical Hours: 40
		Practical Hours: 20

2. Course Objective

The course aims to prepare students to understand obstetrics theoretically and practically, and to equip them scientifically to handle all cases they encounter, make sound decisions in solving them, and train them to become skilled doctors to serve society and develop this field.

3. Course Outcomes, Teaching/Learning Methods, and Assessment

- **Cognitive Objectives**

1. Introduce students to obstetrics and how to deal with women before, during, and after pregnancy regarding diagnosing medical conditions, treatment methods, and future prevention.
2. Train students theoretically and practically in obstetrics by involving them in delivery rooms, operating rooms, and clinical skills lab training.
3. Introduce and train students on the preventive aspect for pregnant women through pre-pregnancy clinic visits and discussing various cases.
4. Provide study opportunities to acquire advanced knowledge in this field.

- [Affective and Value Objectives:]

- Qualify students for ethical and optimal interaction with female patients.

4. Teaching and Learning Methods

- Delivering theoretical lectures.
- Training students in the clinical skills lab on various and emergency cases in the subject.
- Training students in the teaching hospital on various delivery cases in delivery rooms and cesarean sections, as well as training them in the public health department and primary healthcare center for pregnant women.
- Seminars.
- Using small group training methods.

5. Assessment Methods

First Semester Exam	10%
Mid-Year Exam	20%
Second Semester Exam	10%
Unexpected Quizzes	(Score included in semester exam)
Final Exam	
Practical	(50%)
Theoretical	(10%)

[6. Course Structure]

Week	Hours	Required Learning Outcomes	Unit/Subject Name	Teaching Method	Assessment Method
First Semester (Weeks 1-15)	20 theoretical hours	3 units	Obstetrics	Lectures and clinical training	- First Semester Exam - Mid-Year Exam - Second Semester Exam - Final Practical Exam - Final Theoretical Exam
	10 practical hours				
Second Semester (Weeks 16-30)	20 theoretical hours	3 units	Obstetrics	Lectures and clinical training	

	10 practical hours				

7. Infrastructure

- Fourth-Year lecture hall – College of Medicine.
- Clinical training in the obstetrics ward and delivery room at Al-Hakim Teaching Hospital and the Children and Maternity Hospital.
- Library.

8. Course Textbooks

Required Textbooks	*Obstetrics by Ten Teachers 19th Edition*
External Sources	*Essential Gynecology & Obstetrics 5th Edition*

Curriculum of the Department of Obstetrics

Week	Date	Theoretical Subject	Practical	Lecturer (Including External)
1	22-09-2025	History and examination in obstetrics	History taking	Dr. Kawthar Issa
2		Fertilization, implantation & early development of embryo		Saba Jassim Mahdi
		Maternal pelvis and fetal skull		Saba Jassim Mahdi
2		Placental development and function		Saba Jassim Mahdi
3		Physiological changes in pregnancy	Obstetrical examination	Dr. Hala Taher
		Process of labour		Saba Jassim Mahdi
4		Antenatal care	Normal pregnancy	Dr. Hala Taher
		Management of labour		Saba Jassim Mahdi

5		Abnormal labour	Caesarean section history taking	Saba Jassim Mahdi
		Induction of labour		Dr. Kawthar Issa
6		Obstructed labour		Saba Jassim Mahdi
		Prolonged pregnancy		Dr. Kawthar Issa
7		Malposition Malpresentation (Breech)	Postoperative history & examination	Saba Jassim Mahdi
8		Malpresentation (Face and Brow) Abnormal lie (transverse lie)		Saba Jassim Mahdi
9		Polyhydramnios, Oligohydramnios	Caesarean section observation	Dr. Hala Taher
10		Antepartum hemorrhage, placenta previa, Abruptio placentae		Saba Jassim Mahdi
11		Assessment of fetal wellbeing in pregnancy Assessment of fetal wellbeing in labour	Skill lab.	Saba Jassim Mahdi
12		Preterm labour Preterm premature rupture of membranes		Dr. Kawthar Issa
13		Fetal growth restriction Intrauterine fetal death (IUD)	Cardiotocography	Dr. Kawthar Issa
14		Operative intervention in obstetrics (forceps, ventouse)		Saba Jassim Mahdi
15		Postpartum hemorrhage (primary and secondary) Genital Tract Injuries	Uterotonic drugs	Saba Jassim Mahdi
16		Emergency in obstetrics Maternal collapse		Dr. Hala Taher
17		Pain relief in labour Caesarean section	Skill lab.	Saba Jassim Mahdi

18		The puerperium Breast changes and abnormal conditions in pregnancy		Dr. Hala Taher
19		Venous thromboembolic disease in pregnancy	Obstetrics instruments	Dr. Kawthar Issa
		Cardiac disease in pregnancy		Dr. Kawthar Issa
20		Diabetes in Pregnancy. Hypertension in pregnancy.	Observation of labour	Dr. Kawthar Issa
21		Multiple Pregnancy		Saba Jassim Mahdi
22		Renal disease in pregnancy Endocrine disorder in pregnancy	Skill lab. normal delivery	Dr. Kawthar Issa
23		Vomiting in pregnancy Hyperemesis gravidarum		Dr. Kawthar Issa
24		Gastrointestinal disease in pregnancy	Instrumental delivery	Dr. Kawthar Issa
25		Epilepsy		Saba Jassim Mahdi
26		Perinatal infections	Forceps types	Saba Jassim Mahdi
27		Early pregnancy loss		Saba Jassim Mahdi
28		Rh isoimmunization	Ventouse	Dr. Rasha Hatem
29		Liver disease in pregnancy		Dr. Rasha Hatem
30		Anemia in pregnancy	Skill lab.	Dr. Hala Taher
31		Diagnostic ultrasound		Dr. Rusul Ali
32		Drugs used in pregnancy		Dr. Afaf

Department of Surgery

Surgery Curriculum

❑ Fourth Year Curriculum

✪ General surgery:

عدد ساعات المقرر الدراسي: الفصل الأول و الثاني: نظري= 68 ساعة.... سريري= 48 ساعة

1. Esophagus. Congenital anomaly, F.B., Tumors, Surgical aspect of Achalasia, Reflux, Hiatus Hernia
2. Esophagus. Esophagitis, Dysphagia, Achalasia, Reflux, GERD, Hiatus hernia
3. Stomach and Duodenum: Acute dilatation, Surgical treatment of peptic ulcer
4. Stomach and Duodenum: Secretary tests, Radiology Endoscopy, Gastritis, Peptic ulcers
5. Tumors of stomach, post gastric surgery complications
6. Gastro-intestinal bleeding and its treatment
7. Liver: Investigations, Jaundice, Hepatitis, Cirrhosis, Portal hypertension
8. Spleen: Indications for surgery. Surgical aspect of portal hypertension
9. Liver: Injury, Abscess, Cysts including Hydatid cyst, Tumors
10. Gall bladder and Biliary tree: Investigations Congenital anomaly, Injuries, stones, Cholecystitis, Obstructive jaundice & Tumors.
11. Laparoscopy.
12. Mesentery and peritoneum: Peritonitis, Cysts, Subphrenic abscess.
13. Appendix: Appendicitis, Mass, Tumors.
14. Pancreas: Pancreatitis acute and chronic, cysts, Tumors Exocrine &Endocrine.
15. Small and Large bowel diseases
    - Surgical anatomy and physiology
    - Constipation
    - Diverticular disease and blind loop syndrome
    - Inflammatory bowel diseases
    - Enterocutaneous fistula
    - Mesenteric vascular ischemia
    - Intestinal obstruction
    - Benign and Malignant tumors of intestine.
16. Anorectal diseases

- Surgical anatomy and physiology
- Clinical assessment
- Rectal prolapse, rectal Injuries and solitary rectal ulcer
- Rectal tumours
- Pilonidal sinus.
- Anal fissure, strictures, perianal abscess and perianal fistula.
- Hemorrhoids.
- Anal canal tumours
- Anal incontinence
- Lower GIT bleeding

17. Diabetic foot and gangrene
18. Hernias
19. Abdominal wall

✪ **Urinary tract lectures**

عدد ساعات المقرر الدراسي: الفصل الأول و الثاني: نظري= 15 ساعة

20. Urinary tract imaging
21. Congenital anomalies of kidney and ureter
22. Congenital anomalies of urinary bladder and urethra
23. Urinary tract infections
24. Vesico - ureteral reflux (VUR)
25. Genitourinary tuberculosis and bilharziasis
26. Minimal invasive Urology; Endourology, Laparoscopy, and
27. Robotic surgery
28. Urinary lithiasis
29. Obstructive uropathy
30. Tumors of the urinary bladder
31. Tumors of the kidney and ureter
32. Carcinoma of prostate
33. Benign prostatic hyperplasia
34. Benign disorders of the testicle
35. Tumors of the testis
36. Male infertility and sexual dysfunction
37. Renal transplantation
38. Introduction; anatomy and physiology of the kidney

39. Acute renal failure
40. Chronic renal failure
41. Nephritic and nephrotic syndromes
42. Glomerulonephritis
43. Glomerulopathies associated with systemic diseases
44. Diabetic nephropathy and hypertensive nephropathy
45. Drugs and the kidney

✪ **Paediatric surgery:**

عدد ساعات المقرر الدراسي الثاني: 7 ساعات

1. Introduction, general principle, congenital abdominal wall anomalies (omphalocele, Gastroschisis, infantile umbilical hernia, Congenital Inguinal Hernia), congenital diaphragmatic hernia
2. GIT Disorders in paediatric: Oesophageal Atresia, Congenital Hypertrophic Pyloric Stenosis (CHPS), Intestinal obstruction in neonates, infants and children (Duodenal Atresia/Stenosis/Web, Jejunal and ileal atresia, Meconium Ileus, Peritoneal bands, Strangulated inguinal hernia, Hirschsprung's disease (aganglionic megacolon) (Congenital megacolon) Intussusception)
3. Anorectal malformations (Imperforate Anus), Meconium plug syndrome, Necrotizing enterocolitis, Biliary Atresia (Neonatal obstructive jaundice), Choledochal Cyst: (Obstructive jaundice in childhood)
4. Pancreas congenital anomalies (Annular pancreas), Hydrocele, The foreskin and circumcision,
5. Childhood tumours

المنهاج الدراسي لمادة الاخلاق الطبية

1- الاخلاقيات الطبية

الاخلاقيات الطبية جزء مهم اساسي في مهنة الطب ومنذ زمان الطبيب اليوناني ابو قراط في القرن الخامس قبل الميلاد والذي يعتبر الطبيب المؤصل لمفهوم الاخلاق الطبية. وممارسة مهنة الطب باحتراف ونزاهة ايضا يعود تاريخه الى زمن ابو قراط حيث كان الاطباء يؤدون القسم علانية في الالتزام بتقديم مصلحة المريض فوق كل الاعتبارات.

لقد تاثرت الاخلاقيات الطبية في الفترة الاخيرة بمفهوم حقوق الانسان حيث ان الاخلاقيات الطبية لها ارتباط متين بالحقوق اذ يوجد في كل البلدان عدة قوانين تحدد الطرق التي يجب اتباعها عند معالجة المرضى او عند القيام بالابحاث العلمية بالاضافة الى ان هناك في كل بلد سلطة رقابية دورها تسليم رخص المباشرة للاطباء ولها الاهلية لاصدار العقوبات

على الاطباء الذين لا يلتزمون بقواعد الاخلاقيات الطبية. فكثرا ما تكون مقاييس الاخلاقيات اصعب وادق من مقاييس التشريعات القانونية فتختلف القوانين من بلد الى اخر بينما تتجاوز الاخلاقيات الحدود الترابية لتلك البلدان وعلى هذا الاساس فسيكون المنهج المتبع هو الاخلاقيات وليس القانون.

2- **الهدف من دراسة الاخلاقيات الطبية**

أن يكون الطبيب المتخرج مخلصاً في عمله، متحلياً بمكارم الاخلاق, معترفاً بالجميل لمعلميه ومدربيه، وأن لا يكتم علماً، ولا يتجاهل جهد الآخرين، كما أن عليه أن يكون قدوة في رعاية صحته والقيام بحق بدنه ومظهره العام، وأن يتجنب كل ما من شأنه أن يُخل باحترام المهنة داخل مكان العمل وخارجه. كما ان تعليم الأخلاقيّات الطبية يساعد الطلبة على معرفة القضايا ويلقنهم طرق الاستجابة لها انطلاقا من تطبيق قواعد عقلانية. فهذه المادة لها دور مهم فى علاقة الطبيب بالمجتمع وعلاقته بزملائه وفى الاهتداء لأحسن الطرق لتطلعاته الطبيّة الاخلاقية والانسانية.

3- **طريقة اعطاء المادة:** تعطى المادة على شكل محاضرات نظرية وباللغة العربية.

4- **النظام الدراسي الاكاديمي:** نظام سنوي.

5- **العدد الكلي للساعات:** 30 ساعة.

الساعات الدراسية للفصل الاول:

الاسبوع	محاضر خارجي	الساعات	اسم الوحدة او الموضوع	طريقة التعليم	طريقة التقييم
الاول	د. علي حاسم محمد	1	**مقدمة:** ما هي الاخلاقيات الطبية, ما الفائد من دراسة الاخلاقيات الطبية و الاحتراف الطبي, والقانون.	نظري	امتحانات قصير, وفصلي ونصف السنة
الثاني	د. علي حاسم محمد	1	**اهم خصائص الاخلاقيات الطبية**: خاصيات الاخلاقيات الطبية, من له الاهلية للتعريف بما هو اخلاقي؟	نظري	امتحانات قصير, وفصلي ونصف السنة
الثالث	د. علي حاسم محمد	1	**اهم خصائص الاخلاقيات الطبية**: هل ان الاخلاقيات الطبية قابلة للتغيير؟	نظري	امتحانات قصير, وفصلي ونصف السنة
الرابع	د. علي حاسم محمد	1	**اهم خصائص الاخلاقيات الطبية**: هل ان مقاييس الاخلاقيات الطبية تتغير حسب البلدان.	نظري	امتحانات قصير, وفصلي ونصف السنة
الخامس	د. علي حاسم محمد	1	**اهم خصائص الاخلاقيات الطبية**: دور الجمعية العالمية للاطباء في اعداد المعايير العامة للاخلاقيات الطبية في جميع انحاء العالم.	نظري	امتحانات قصير, وفصلي ونصف السنة
السادس	د. علي حاسم محمد	1	**اهم خصائص الاخلاقيات الطبية**: كيف يقرر الخواص ما يتماشى والاخلاقيات الطبية. ماهو اهم, اخلاقيات الفضيلة؟	نظري	امتحانات قصير, وفصلي ونصف السنة
السابع	د. علي حاسم محمد	1	**سلوكيات غير موضوعية:** الامتثال, التقليد, التحسس والميل. الحدس , التعود. **سلوكيات موضوعية:** المنطقية, اتباع ما	نظري	امتحانات قصير, وفصلي ونصف السنة
الثامن	د. علي حاسم محمد	1	**أطباء ومرضى:** ما هي خضوصية العلاقات التي تربط الطبيب بالمريض؟ اعلام المريض وطلب موافقته, اتخاذ القرار في حالة قصور المريض عن	نظري	امتحانات قصير, وفصلي ونصف السنة

			ذلك.		
التاسع	د. علي حاسم محمد	1	**أطباء ومرضى:** السرية, اسئلة تتعلق ببدء الحياة, الحمل والاخلاقيات الطبية, الاجهاض.	نظري	امتحانات قصير, وفصلي ونصف السنة
العاشر	د. علي حاسم محمد	1	**أطباء ومرضى:** اسئلة تتعلق بنهاية الحياة, الانهاء المتعمد للحيات, المساعدة على الانتحار, الانتحار, العودة الحالات	نظري	امتحانات قصير, وفصلي ونصف السنة
الحادي عشر	د. علي حاسم محمد	1	**الاطباء والمجتمع:** أهداف دراسة الموضوع, دراسة الحالة, ماهي خصوصية علاقة الطبيب بالمجتمع, تعدد مرجعية النظر,	نظري	امتحانات قصير, وفصلي ونصف السنة
الثاني عشر	د. علي حاسم محمد	1	**الاطباء والمجتمع:** المد بوسائل العمل, الامانة. توفير الوسائل, الصحة العمومية,	نظري	امتحانات قصير, وفصلي ونصف السنة
الثالث عشر	د. علي حاسم محمد	1	**الاطباء والمجتمع:** الصحة العالمية, العودة لدراسة حالات.	نظري	امتحانات قصير, وفصلي ونصف السنة
الرابع عشر	د. علي حاسم محمد	1	**أخلاق الطبيب واجبات الطبيب نحو التمريض**	نظري	امتحانات قصير, وفصلي ونصف السنة
الخامس عشر	د. علي حاسم محمد	1	السر الطبي, واجبات الطبيب تجاه المجتمع, القضايا الاجتماعية	نظري	امتحانات قصير, وفصلي ونصف السنة

الساعات الدراسية للفصل الثاني:

الاسبوع	محاضر خارجي	الساعات	اسم الوحدة او الموضوع	طريقة التعليم	طريقة التقييم
الاول	د. علي جاسم محمد	1	استثمار الموارد الصحية, مرضى الإيدز وسائر الأمراض السارية,	نظري	امتحانات قصير, وفصلي ونصف السنة
الثاني	د. علي جاسم محمد	1	تيسير الموت أو قتل المرحمة, نقل الأعضاء, حالات العنف (الاسري والعنف الاجتماعي)	نظري	امتحانات قصير, وفصلي ونصف السنة
الثالث	د. علي جاسم محمد	1	**أطباء وزملاء:** أهداف هذا الباب, دراسة حالات, التحديات التي تواجه السلطة الطبية,	نظري	امتحانات قصير, وفصلي ونصف السنة
الرابع	د. علي جاسم محمد	1	**أطباء وزملاء:** الاعلام عن تصرفات خطيرة او منافية للاخلاقيات الطبية.	نظري	امتحانات قصير, وفصلي ونصف السنة
الخامس	د. علي جاسم محمد	1	**أطباء وزملاء:** علاقات الاطباء الزملاء بالمدرسين والطلبة. الاشارة الى بعض السلوكيات الخطيرة والمخالفة	نظري	امتحانات قصير, وفصلي ونصف السنة

			للاخلاقيات.		
السادس	د. علي جاسم محمد	1	**أطباء وزملاء:** العلاقة بعناضر اخرى يعملون بميدان الصحة, العلاقة ببقية أعوان الصحة, التعاون,	نظري	امتحانات قصير, وفصلي ونصف السنة
السابع	د. علي جاسم محمد	1	**أطباء وزملاء:** فض الخلافات والنزاعات الطارئة, عودة الى دراسة حالات.	نظري	امتحانات قصير, وفصلي ونصف السنة
الثامن	د. علي جاسم محمد	1	**أطباء وزملاء:** اهمية البحث الطبي, متطلبات الاخلاق الطبية, التوجيهات الاخلاقية الدولية في البحث الطبي البيولوجي, موافقة لجنة الاطباء, القيمة العلمية,	نظري	امتحانات قصير, وفصلي ونصف السنة
التاسع	د. علي جاسم محمد	1	**أطباء وزملاء:** القيمة الاجتماعية, المخاطر والمنافع, الموافقة الواعية, السرية, اعلام ذوي النظر, قضايا لم يقع حلها,	نظري	امتحانات قصير, وفصلي ونصف السنة
العاشر	د. علي جاسم محمد	1	**مسؤوليات الاطباء وامتيازاتهم**	نظري	امتحانات قصير, وفصلي ونصف السنة
الحادي عشر	د. علي جاسم محمد	1	**الاعلان عن حرية الطبيب في المشاركة في الاجتماعات الطبية, الاعلان عن استقلالية الطب وحرية المهنة**	نظري	امتحانات قصير, وفصلي ونصف السنة
الثاني عشر	د. علي جاسم محمد	1	**الموقف من المسؤولية المهنية في خاصية العلاج, الموقف من التعليمات الخلقية عند الانتداب الدولي للاطباء**	نظري	امتحانات قصير, وفصلي ونصف السنة
الثالث عشر	د. علي جاسم محمد	1	**الاعلان الخص بمساندة الاطباء الرافضيين المشاركة او تأييد استعمال التعذيب او كل ما يعتبر**	نظري	امتحانات قصير, وفصلي ونصف السنة
الرابع عشر	د. علي جاسم محمد	1	**مسؤولية الطبيب نحو نفسه**	نظري	امتحانات قصير, وفصلي ونصف السنة
الخامس عشر	د. علي جاسم محمد	1	**مستقبل الاخلاقيات الطبية**	نظري	امتحانات قصير, وفصلي ونصف السنة

Curriculum of Department of Pathology and Forensic Medicine

Curriculum of Forensic medicine and medical Jurisprudence including Toxicology

Forensic medicine mainly deals with examination and assessment of individuals who have been or are suspected to have been injured or killed by external influence such as trauma or intoxication, but also of individuals who are suspected of having injured another person.

At the end of the course in Forensic Medicine, the undergraduate student will be able to:

1- Identify the basic Medico-legal aspects of hospital and general practice.
2- Examine medico-legal cases and prepare reports or certificates in accordance with the law of land.
3- Define the Medico-legal responsibilities of a general physician while rendering community service either in a rural primary health center or an urban health center
4- Perform medico-legal postmortem examination and interpret autopsy findings and results of relevant investigations to logically conclude the cause, manner and time since death.
5- Practice medicine ethically with humanly etiquette, discharge duties promptly and execute legal responsibilities of the physician toward his patient, profession, society, state and humanity at large.
6- Prevent and protect himself from medical and legal mishap.
7- Identify and apply relevant legal provisions applicable to the medico-legal and medical practice.
8- Collect, preserve and dispatch specimens in medico-legal case and other concerned materials to the appropriate Government agencies for necessary examination.

9- Diagnose, apply principles of management and understand medico-legal implications of common poisons.

10- Describe and Apply general principles of analytical, environmental, occupational and preventive aspects of toxicology.

Objectives of the Academic Course:

1. **KNOWLEDGE**

The goal of teaching forensic Medicine in the undergraduate medical course is to produce a physician who will be well informed and alerts about his/her medico-legal responsibilities and is capable of being discharging medico-legal duties in medical practice. Finally, on the basis of above context, those who are concern with Forensic medicine should initiate the thinking to redesign the curriculum where appropriate and give emphasis on those aspects in teaching learning and assessment of the students in under graduate medical education in Forensic Medicine.

2. **SKILLS: the student shall be able to:**

Make observations and logical inferences in order to initiate enquiries in criminal matters and Medico-legal problems. Able to carry on proper Medico-legal examination and documentation/Reporting of Injury and Age and able to conduct examination for sexual offences and intoxication. The student should be observe the principles of medical ethics in the practice of his profession.

List of Competencies to acquire:

1. Perform ethical medical practice and maintain proper doctor-patient relationship.
2. Make observations and logical inferences in order to initiate enquiries in criminal

3. Matters and Medico-legal problems Collect, preserve and dispatch the medico-legally important specimen.
4. Prepare, dispatch and store the proper medical records.
5. Perform proper examination of victim/assailant of physical assault and sexual assault.
6. Perform medico-legal examination (impotency, age determination, sex determination, mental fitness, mental state).
7. Perform medico-legal autopsy and interpret the findings.
8. Prepare certificates and medico-legal reports according to the law of the land.
9. Prepare referral or discharge certificate and death certificate properly and authentically as per ICD-10.
10. Supervise and guide the medical team/practitioner regarding the ethical and legal consequence related to medical issues.
11. Handling dead body ethically and morally.
12. Explain legal provision and guide members related to medical and medico-legal practice.
13. Record the dying declaration.
14. Diagnose and declare the death of a person.

Educational Institution: University of Misan / College of Medicine.

Scientific Department / Branch: Department of pathology and forensic Medicine.

Available Attendance forms for Students: Mandatory Attendance.

Academic System (Semester/Annual): Annual System.

Total Study Hours: 60 Theory Hours + 60 Practical Hours.

Date of Preparation of this Description: 2025.

Distribution of teaching - learning hours:

2- First semester / forth Year / Theoretical:

Week	Out lecturer	hours	Name of unite or subject	Learning method	Evaluation method
First	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Introduction** (History of Forensic Medicine, Need, Scope, Importance and probative value of Medical evidence in Crime Investigation)	Theory/ Practical	Interactive question
Second	Dr. Ali J. Mohamad	2 Theo . 2 Pract.	**Forensic identity** (Introduction, definition, types, corpus delicti, Data useful for Identification of Living and Dead, Age and sex determination and its medico-legal. Importance. Medico legal aspect of DNA fingerprinting - a brief introduction. Other methods of establishing identity: blood, Dactylography, Tattoo marks, Deformities, Scars.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Third	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Thanatology** (Definition and concept of death, Brainstem Death in relation to Organ Transplantation, Causes of sudden Natural deaths, Changes after death, Cooling, Hypostasis, Changes in eye, Muscle changes,	Theory/ Practical	Quiz/ first term exam/ midterm exam
Fourth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Thanatology**: Putrefaction, Adipocere, Mummification, Estimation of time since death**,** Presumption of death and survivorship, disposal and preservation of dead bodies	Theory/ Practical	Quiz/ first term exam/ midterm exam
Fifth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Medico-legal autopsy** (Exhumation and Autopsy: Objectives, Facilities, Rules and Basic techniques, Proforma for reporting medico-legal autopsy)	Theory/ Practical	Quiz/ first term exam/ midterm exam
Sixth	Dr. Ali J. Mohamad	2 Theo.	**Medico-legal autopsy** :Exhumation, examination of	Theory/ Practical	Quiz/ first term exam/

		2 Pract.	mutilated remains, Obscure autopsy and post-mortem artifacts		midterm exam
Seventh	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Trauma:** Definition and classification of injuries:Blunt force Trauma Abrasions, Contusions and LacerationsSharp force Trauma Incised, Stab and Chop wounds Physical methods of Torture and their identification Firearm injuries and Explosive injuries and **Basics of Firearms:** **a)** PM examination of Firearm injury deaths. **b)** Removal and collection of Bullets, Pellets etc	Theory/ Practical	Quiz/ first term exam/ midterm exam
Eighth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Trauma** (Complications and causes of death due to injury. Medico-legal aspect of injury/hurt, simple and grievous hurts, murder, Antemortem & Postmortem Wounds, Age of the injury, cause of death and relevant sections of I.P.C., Cr.P.C. Causative Weapon and appearance of Suicidal, Accidental and Homicidal injuries, Regional injuries: Head injury, mechanism, Injury to Scalp, Skull, Brain and Spinal Injuries.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Ninth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Trauma**: (Intracranial Haemorrhage, changes in Brain Road Traffic Accidents, Thermal injuries: Injuries due to heat and cold, Frostbite, Burns, Scalds and Bride burning, Injuries due to Electricity, Lightening, Non-Accidental Domestic Violence, and Starvation deaths.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Tenth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Medico-legal aspects of sex, marriage and infant death: (**Explanation and ML Importance of Terminologies:	Theory/ Practical	Quiz/ first term exam/ midterm exam

			Impotence, Sterility, Virginity, Pregnancy, Delivery, Paternity, Legitimacy, Assisted Reproductive Technique Medico Legal Aspects and PNDT Act, Sexual Offences and perversions: Natural (Rape, Adultery and Incest), Unnatural (Sodomy, Bestiality and Buccal coitus) Lesbianism, perversions and relevant sections of I.P.C. and Cr.P.C, and Examination of Rape and Sodomy cases.		
Eleventh	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Medico-legal aspects of sex, marriage and infant death:** Abortions, Medical Termination of pregnancy, Criminal abortions and relevant IPC sections**,** **Infant death: (**Explanation of Terminologies Viability Live Births, Deadborn, Stillborn, Determination of age of Foetus and Infant with special reference to 3, 5, 7 & 9 months of I.U.Age, Infanticides: Autopsy to confirm Livebirth, period of survival, causes of Deaths, and Battered Baby Syndrome and Sudden Infant Death Syndrome.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Twelfth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Asphyxial deaths:** Introduction, Pathophysiology, General Signs-Symptoms Asphyxia**,** Determination of age of Foetus and Infant with special reference to 3, 5, 7 & 9 months of I.U.Age.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Thirteenth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Asphyxial deaths:** Infanticides: Autopsy to confirm Livebirth, period of survival, causes of Deaths, Battered Baby Syndrome and Sudden Infant Death Syndrome.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Fourteenth	Dr. Ali J.	2	**Forensic psychiatry:**	Theory/	Quiz/ first

	Mohamad	Theo. 2 Pract.	Basic concepts of Forensic Psychiatry in respect of Civil and Criminal responsibility**,** Examination, Certification, restraint and admission to Mental Hospital**.**	Practical	term exam/ midterm exam
Fifteenth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Forensic psychiatry:** Mental Health Act 1987: Principles and Objectives**.**	Theory/ Practical	Quiz/ first term exam/ midterm exam

3- Second semester / forth Year / Theoretical:

Week	Out lecturer	hours	Name of unite or subject	Learning method	Evaluation method
First	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Toxicology:** General principles (Introduction to Toxicology, Epidemiology of poisoning. General consideration and Laws in relation to poisons / Narcotic drugs and Psychotropic substances Act, Duties and Responsibilities of attending Physician**,** Basics of Environmental and Industrial Toxicology in relation to Health & Ecology.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Second	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Toxicology:** Common poisons and their classification, Identification of common poisons, Routes of Administration, Actions of poisons and factors modifying them, Diagnosis of poisoning (Clinical and Confirmatory), Treatment / Management of cases of acute and chronic poisoning, Analytical Toxicology (Principles: Bedside & Common Lab. Tests), Collection, Preservation and Dispatch of Viscera to FSL, Regulatory Toxicology for prevention of Hazards to Health and Ecology.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Third	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Corrosive & irritant poisons:** Inorganic Corrosives- Sulphuric, Nitric & Hydrochloric Acid, Organic Corrosives- Phenol, Oxalic Acid, Inorganic Non-	Theory/ Practical	Quiz/ first term exam/ midterm exam

			Metallic Irritants- Phosphorus,Halogens, Inorganic Metallic Irritants- Arsenic, Lead, Mercury, Copper,		
Fourth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Corrosive & irritant poisons:** Organic Vegetable Irritants- Abrus, Castor, Croton, Calotropis, Semicarpus, Ergot. Organic Animal Irritants – Snake Bite, Scorpion & other common insect bites diagnosis and Management; Medicolegal Aspects, Mechanical Irritants- diagnosis and treatment & Medicolegal Aspects	Theory/ Practical	Quiz/ first term exam/ midterm exam
Fifth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Trauma** (classification of injuries: Blunt force Trauma, Sharp force Trauma, Firearm injuries and Explosive injuries and Basics of Firearms, Regional injuries: Head injury, mechanism, Injury to Scalp, Skull, Brain and Spinal Injuries,	Theory/ Practical	Quiz/ first term exam/ midterm exam
Sixth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Neurotoxic:** Ineberiates- Ethyl Alcohol, Methyl Alcohol**,** Somniferous and Sedative Hypnotics – Opium and Derivatives, Barbiturates**,**	Theory/ Practical	Quiz/ first term exam/ midterm exam
Seventh	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Neurotoxic:** Deliriants- Dhathura, Cannabis, Cocaine. Insecticides/ Pesticides/ Agrochemical- Organo-phosphorus **,** Organo-chlorides, Carbamates , Pyrethriods, Aluminium phosphide.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Eighth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Neurotoxic:** Spinal Poisons- Strychnine, Peripheral Poisons- Curare.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Ninth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Asphyxiants (gases):** Carbon monoxide, Carbon Dioxide, Cyanogens and Cyanides	Theory/ Practical	Quiz/ first term exam/ midterm exam
Tenth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Cardiac poisons**: Oleanders, aconite, tobacco	Theory/ Practical	Quiz/ first term exam/ midterm

					exam
Eleventh	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Other poisons:** Domestic/ Household Poisons- Kerosene, Detergents, Disinfectants, Cosmetics, Rodenticide mothballs etc. Therapeutic Drug Toxicity/ poisoning by Medicines- Salicylates, Paracetamol, Newer derivatives of sedatives	Theory/ Practical	Quiz/ first term exam/ midterm exam
Twelfth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Medical jurisprudence:** Legal and ethical aspects of practice of medicine, Rights, Privileges and Duties of registered Medical Practitioners, Infamous conduct, Professional secrecy and privileged communications, Medical Ethics and prohibition of Torture & care of Torture Victims.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Thirteenth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Medical jurisprudence:** Consent – Its relevance in Medical Practice & medical record maintainance, Medical Negligence and contributory negligence, Precautionary measures and defences for Medical Practitioners against legal actions, Medical/Doctors indemnity insurance, Consumer Protection Act relevant to medical Practice.	Theory/ Practical	Quiz/ first term exam/ midterm exam
Fourteenth	Dr. Ali J. Mohamad	2 Theo. 2 Pract.	**Legal procedures in medico-legal cases:** Medico-Legal Investigations of death in suspicious circumstances, different Inquest, type of offences**,** Types of Criminal courts and their powers, punishments prescribed by law, kinds of witnesses, Evidence, Documentary Medical evidence, Dying declaration and Dying deposition,	Theory/ Practical	Quiz/ first term exam/ midterm exam
Fifteenth	Dr. Ali J. Mohamad	2 Theo. 2	**Legal procedures in medico-legal cases**: The Trial of criminal cases, Rules and	Theory/ Practical	Quiz/ first term exam/

		Pract.	Conventions to be followed by Medical Witness at Medical evidence, subpoena, conduct money**,** Relevant Sections from the Indian Evidence Act, Indian Penal code and Criminal Procedure code.		midterm exam

REFERENCE BOOKS

1. Russell S. Fisher & Charles S.Petty: Forensic Pathology.
2. Keith Simpson: Forensic Medicine.
3. Jurgen Ludwig: Current Methods of autopsy practice.
4. Gradwohl – Legal Medicine.
5. A Doctors Guide to Court – Simpson.
6. Polson C.J. : The essentials of Forensic Medicine.
7. Atlas of Legal Medicine (Tomro Watonbe)

Subject: Pediatrics

Fourth Year

Teaching staff:
1. Prof. Dr. Eman Khammas Al-Sadi (HEAD of the department)
2. Prof. Dr. Hussain Fadhel
3. Prof. Dr. Mohammed Abed Darweesh
4. Dr. Saja Jumaa Domed
5. Dr. Ali Majeed Al- Lami (rapporteur)
6. Instructor Dr. Zahra hazem
7. Instructor Dr. Ghoffran
Secretory staff: Athraa

Curriculum in Pediatrics (three Years involved the fourth, the fifth& the sixth year students)
Course duration: One academic year.
Allocated marks: 100 marks.
Objectives
1. Graduation of a qualified efficient medical students with efficient abilities for assessing growth and development at different ages appropriately in addition, solving pediatric problems and protecting children from development of these conditions.

2. Attaining a maximum level for diagnosis and treatment of pediatric diseases with the least cost and the right drugs.
3. Enhancing of different scientific researching on the department, the college and the university levels.
4. Enhancement of collaborative actions between the college and the governorate general health administration for reaching a maximum benefits and care for children.
5. Graduation of an efficient postgraduate specialties in pediatrics carrying the name of the college were they gained their certificates.

Curriculum of the Fourth academic year

Introduction:

In 30 hours' lectures, we are going to understand the growth and development of pediatrics during health in different age groups and to recognize the most important signs and symptoms of diseases in different pediatric age groups and how to deal with these conditions, how to diagnose, how to investigate, and how to treat these conditions.

Curriculum of the Fourth academic year			
No.	Components	Duration	Unit
1st semester	Theoretical lectures	15 hrs.	1
2nd semester	Theoretical lectures	15 hrs.	1
total		30 hrs.	2

Places of completion the curriculum: Lecture halls in the college

Material used for completion the curriculum:

1) Power point presentation.
2) Radiological films of patients (Plain X-ray, CT scan and MRI films)
3) Diagrams and posters
4) Clinical video tapes and movies.

Theoretical Syllabus: one hour for each topic 1st trimester 15 lecture
1- Introduction to pediatrics: - Definition, History taking, & Physical examination.
2- Development & growth: - Physiology of growth, growth assessment, growth chart, factors affect growth. - Growth in prematurity, -Developmental 4 parts: Years of development: birth till 6 years including gross motor. - Fine motor, speech, language and social development, development warning signs.
4- Immunization:

-Types (passive, active), cold chain storage, contraindication of vaccination. - Iraqi program of vaccination, - BCG, DPT, Oral polio vaccine, Rota virus vaccine, Hep B vaccine, Hib vaccine, -Quinary vaccine, Quaternary vaccine. Other vaccine: Hep A vaccine, Rabies vaccine, Typhoid Cholera, Cholera vaccine, yellow fever - vaccine, pneumococcal vaccine, meningococcal, and influenza vaccines. -Delayed vaccination.
5- Breast feeding: - Anatomy of the breast, Years of the development of the breast, -Physiology of milk secretion and production, - breast problems interfere with breast feeding, fore milk and hind milk, colostrum, - technique of breast feeding, breast engorgement, sore nipple, retracted nipple. -Weaning, artificial feeding, differences between breast milk and cow milk. -Types of artificial feeding. Infant formula
5- Malnutrition: - definition and types of malnutrition, Assessment and classification of malnutrition, - Welcome classification, WHO classification of severe malnutrition - kwashiorkor, - marasmus. -Sequelae of malnutrition, - treatment of malnutrition.
6- Rickets: -Types and pathophysiology of rickets, hypophosphatemic and hypocalcemic rickets. - Nutritional, vitamin dependent rickets, vitamin resistant rickets.
Lectures in 2nd trimester 1 hr. each (total 15 hrs.)
Respiratory Disorders: 1 hr. - Introduction. - Epidemiology. - Factors affecting the prevalence of respiratory disorders. Classification of respiratory tract infection (ARI).
Upper respiratory infection: 2 hrs.
- Common cold. - Sore throat. - Tonsillitis. - Acute otitis media. - Mode of presentation of URTI.
Laryngeal & Tracheal infection: 2 hrs. Croup. - Acute epiglottitis. - Bacterial tracheitis. – Other causes of upper air way obstruction like F.B.
Congenital stridor. I hr.
- Presentation. - Management. Bronchiolitis: - Epidemiology. - Pathophysiology. - Clinical manifestations. - Diagnosis & D/D. - Treatment

45- Group A streptococcus: 1hr. - Definition, Etiology, Epidemiology, Pathogenesis. Scarlet fever: - Diagnosis, Differential Diagnosis, Treatment, Complications, Prognosis.
49- Diphtheria (Corynebacterium diphtheriae): 1hr. - Definition, Etiology, Epidemiology, Pathogenesis, Clinical manifestations.
- Respiratory tract diphtheria, Cutaneous diphtheria. Toxic cardiomyopathy. - Toxic neuropathy. - Diagnosis, Treatment, Complications, Prognosis, Asymptomatic case contacts. - Asymptomatic carriers, Vaccine.
51- Pertussis (B. Pertussis and B. Para pertussis): 3 hrs. - Definition, Etiology, Epidemiology, Pathogenesis, Clinical manifestations, Diagnosis, Treatment. -Antimicrobial agents, Isolation, Care of contacts, Complications, Prevention, Acellular vaccine.
52- Mumps: - Definition, Etiology, Epidemiology, Pathogenesis, Clinical manifestations. - Diagnosis, Differential diagnosis, Treatment, Complications, Prognosis, Prevention. 53- Measles: - Definition, Epidemiology, Transmission, Pathology, Pathogenesis, Clinical manifestations, -In apparent measles infection, Laboratory findings, Diagnosis, Differential diagnosis, - Complications, Treatment, vitamin A, Prognosis, Prevention, Vaccine.
54- Roseola (Human Herpes viruses 6 and 7): 2 hrs. - Definition, Epidemiology, Pathogenesis. 55- Roseola infantum (exanthema subitum): -Diagnosis, Laboratory findings, Differential diagnosis, Treatment, Prognosis, Prevention. 56- Rubella: -Definition, Etiology, Epidemiology, Pathogenesis, clinical manifestations, Postnatal infection, -Laboratory findings, Diagnoses, Differential diagnoses, Complications - Congenital Rubella Syndrome (CRS): - Treatment, Supportive care, Prognosis, Prevention, Vaccination.

Curriculum map (4th year students)

Pediatrics Theoretical Curriculum Plan 4th Year 1st trimester curriculum map				
Lecture Topic	Knowledge (K)	Skills (S)	Attitudes/Behaviors (A/B)	Teaching Methods

Lecture Topic	Knowledge (K)	Skills (S)	Attitudes/Behaviors (A/B)	Teaching Methods
1. Introduction to Pediatrics	Definition, scope, differences from adult medicine.	History taking (HEADSSS), physical exam.	Child-friendly communication, cultural sensitivity.	Video demonstrations, role-play.
2.Development & Growth	Growth physiology, milestones (0–6 yrs), warning signs.	Plot growth charts, Denver II screening.	Advocate for early intervention, avoid parental blame.	Growth chart exercises, milestone flashcards.
3. Immunization	Iraqi EPI schedule, contraindications, cold chain.	Vaccine administration (IM/SC), counseling.	Combat vaccine hesitancy with evidence.	Role-play counseling hesitant parents.
4. Breastfeeding	Physiology, foremilk/hindmilk, latch techniques.	Assess/treat engorgement, sore nipples.	Support mothers non-judgmentally.	Latch simulation with dolls.
5. Malnutrition	WHO classifications, kwashiorkor vs. marasmus.	MUAC measurement, RUTF dosing.	Empathy for food-insecure families.	Photo quizzes (clinical signs).
6. Rickets	Nutritional vs. genetic causes, radiologic signs.	Identify bowing deformities, prescribe calcitriol.	Educate on safe sunlight exposure.	X-ray interpretation workshops.

Pediatrics Theoretical Curriculum Plan 4th Year 2nd trimester (Theoretical & Clinical Components): Respiratory & Infectious Diseases Curriculum *(15 Hours Total)* curriculum map

Lecture (Duration)	Topic	Key Learning Objectives	Teaching Method	Assessment
Hour 1	Respiratory Disorders Overview	- Define pediatric respiratory disorders - Analyze global/local epidemiology - Classify ARIs using WHO	Interactive lecture with infographics	5 MCQs

Lecture (Duration)	Topic	Key Learning Objectives	Teaching Method	Assessment
		criteria		
Hours 2-3	Upper Respiratory Infections	- Differentiate viral vs. bacterial URTIs -Demonstrate otoscopy/ tonsillar grading - Apply Centor criteria for strep throat	role-play counseling	OSCE: Throat exam
Hours 4-5	Laryngeal & Tracheal Infections	-Compare croup/epiglottitis/bacterial tracheitis - Manage airway obstruction emergencies - Perform Heimlich maneuver	Simulation drills (airway scenarios)	Emergency case simulation
Hour 6	Congenital Stridor	- Diagnose laryngomalacia - Counsel parents on natural history	Video case studies	Parent counseling checklist
Hour 7	Bronchiolitis	- Interpret RSV testing - Apply nasal suctioning techniques	Virtual patient (RSV vs. COVID-19)	Clinical vignette
Hour 8	Group A Streptococcus	- Diagnose scarlet fever - Treat complications (rheumatic fever)	Case-based learning	Short essay
Hour 9	Diphtheria	- Recognize pseudo membrane - Manage toxic complications	Historical case review (images)	Image quiz
Hours 10-12	Pertussis	- Identify paroxysmal cough - Implement droplet isolation	Video analysis (whooping cough sounds)	Lab: PCR interpretation
Hour 13	Mumps	- Manage parotitis/orchitis - Advocate for MMR vaccine	Outbreak scenario game	Vaccination debate
Hour 14	Measles	- Diagnose Koplik spots - Administer vitamin A	WHO measles field guide	Outbreak response plan
Hour 15	Roseola & Rubella	- Differentiate viral exanthems - Counsel on CRS prevention	Rash identification game	Parent FAQ sheet

1. Assessments
   - Formative: Simulations, role-playing during clinical training
   - Summative: written examination including mcqs questions

Methods of assessment

No.	Exam	Type of assessment	Marks
1	First term	Quiz examination of the theoretical lecture	10
	Mid trimester	Written examination	20
2	2nd term	Quiz examination of the theoretical lecture	10
3	Annual examination quest		40
4	Final written	MCQs & essay questions	60
5	Total		100

Suggested Reading List:

1. Nelson Textbook of Pediatrics
2. Essentials of pediatrics.
3. Various internet related subjects.
4. Assigned Readings.

Educational program

Fifth Year

Subject: Internal Medicine

Stage: 5th Year

Theoretical lectures: 90 hrs.

Number of units: 8 units

General Medicine

Clinical sessions: 60 hr.

Curriculum of the fifth year

Section	Topic	Lecturer	Hr.
A	Rheumatology and connective tissue	Assoc. Prof. Dr. Omar Mansab	11
B	Renal disease	Prof. Dr. Yaseen Obeid Yaseen	12
C	Hematology and immunology	Prof. Dr. Haider Saadoon Qasim	30
D	Neurology	Assoc. Prof. Dr. Abbas Kinbar	30

o Theoretical lectures in the college building halls

o History taking and complete clinical examination on real patients in the outpatient clinics

o Small group teaching

A- Hematology and immunology

This course provides a comprehensive study of blood and immune system disorders. It begins with bone marrow function and the classification of anemias, including nutritional, hemolytic, and genetic types like sickle cell and thalassemia. You will explore malignant conditions such as leukemia, myeloma, and bleeding disorders like hemophilia. The immunology section covers the immune system's structure, its inherited and acquired deficiencies, and the specific pathogenesis and impact of HIV/AIDS.

A.	Hematology and immunology	Hrs.
1	Introductory lecture	2
2	Bone marrow functions, bone marrow failure, aplastic anemia	2
3	Anemia classification	2
	○ Iron metabolism	
	○ Iron deficiency anemia	1
4	Sideroblastic anemia	

	Anemia of chronic diseases	
	Anemia of chronic renal failure	
5	Megaloblastic anemia	2
6	Hemolytic anemia – classification	1
7	Membrane defect anemia	2
	○ Hemoglobinopathies	
	○ Structural defect: SCA, and variants	
	○ Synthetic defect: thalassemia syndromes	
8	Enzymopathy	1
9	Cytotoxic drugs	1
10	Acute leukemia	1
11	Chronic leukemia	2
12	Multiple myeloma	1
13	Polycythemia, essential thrombocythemia, myelofibrosis	2
14	Myelodysplastic syndrome	1
15	Bleeding disorders, ITP	1
16	Hemophilia, von Willebrand disease, acquired hemostatic disorders, DIC	2
17	Blood transfusion and complications	1
18	Clinical immunology	
	Introduction and basic structure and function of the immune system	2
	Inherited and acquired immune disorders	2
	AIDS	2

B- Neurology

This course offers a systematic exploration of clinical neurology, starting with essential neuroanatomy and physiology, including motor and sensory systems. You will learn to localize neurological lesions and use key diagnostic investigations. The curriculum covers a wide spectrum of disorders, from epilepsy and cerebrovascular diseases to demyelinating conditions, peripheral neuropathies, CNS infections, and tumors. It also addresses

degenerative, hereditary, and neuromuscular diseases, providing a comprehensive framework for diagnosing and managing conditions of the nervous system.

B- Neurology	3
Introduction to clinical neurology	
○ Anatomy and physiology of the nervous system	
○ Upper motor neuron	
○ Lower motor neuron	
○ Cerebellum	
○ Sensory system	
Diseases of cranial nerves	
Localizing signs of cerebral diseases, investigation of the central nervous system	1
Epilepsy	2
Demyelinating diseases	2
Spinal cord disease	2
Degenerative diseases of the nervous system	2
Diseases of the peripheral nerves	2
Cerebrovascular diseases	2
Headache and migraine	2
Diseases of the muscles	2
Infections of the central nervous system	2
Extrapyramidal disorders	2
Tumors of the central nervous system	1
Hereditary disorder of the nervous system	1
Nutritional and neurological disease, myopathic complication of malignancies	2

C- Renal diseases

This course provides a comprehensive study of renal medicine, beginning with the physiological principles and key investigations of kidney function. You will explore the spectrum of glomerular diseases, including nephritic and nephrotic syndromes, and learn the clinical approach to both acute kidney injury and chronic renal failure. The curriculum also

covers urinary tract infections, the renal effects of systemic diseases, drug-induced damage, and the principles of dialysis and renal transplantation.

	Renal diseases		
1	Physiological considerations and investigations of the renal function	1	1
2	Glomerular diseases: classification, immunopathology	1	1
3	Acute post-streptococcal nephritis, and other nephritis syndromes	2	2
4	Nephrotic syndrome	1	1
5	Acute renal injury	1	1
6	Chronic renal failure	1	1
7	Dialysis - CAPD	1	1
8	Urinary tract infection and pyelonephritis	1	1
9	Renal aspects of systemic diseases	1	1
10	Drug induced nephropathy	1	1
11	Renal transplantation	1	1

D- Connective Tissue

This course provides a focused study of systemic autoimmune and inflammatory disorders. You will explore the pathology of major conditions like rheumatoid arthritis and systemic lupus erythematosus, alongside related syndromes such as antiphospholipid syndrome. The curriculum covers seronegative Spondyloarthropathy, crystal-induced arthritides like gout, and systemic diseases including scleroderma and vasculitis. It emphasizes the multi-system nature of these conditions, their diagnosis, and the principles of managing chronic inflammatory connective tissue disease.

D. Connective Tissue

1 Rheumatoid arthritis

2 Systemic lupus erythematosus

2 Antiphospholipid antibodies syndrome

3 Spondyloarthropathy

- ○ Ankylosing spondylitis
- ○ Reactive arthritis

- ○ Psoriatic arthritis
- ○ Inflammatory bowel disease associated arthritis

4 Crystal induced arthropathy
5 Systemic sclerosis and its variants
6 Joints infection – Bahcet disease
7 Vasculitis

Subject: Dermatology

Fifth Year

Course name:	Fifth year
Dermatology	
General Medicine	Number of units: 3 unit
Theoretical lectures: 30	Clinical sessions: 30 hrs.

2.3.2.2. Methods of teaching

- ○ Theoretical lectures in the college building halls
- ○ History taking and complete clinical examination on real patients in the outpatient clinics
- ○ Small group teaching

Dermatology
This course provides a comprehensive overview of dermatology, beginning with the structure and function of skin. You will learn to identify primary and secondary skin lesions and explore a wide range of conditions, including bacterial, fungal, viral, and parasitic infections. The curriculum covers common inflammatory disorders like eczema and psoriasis, skin manifestations of systemic diseases, bullous diseases, skin tumors, and sexually transmitted infections. It concludes with the principles of topical, systemic, and physical dermatological therapies.

2.3.2.3. Curriculum of Dermatology

	1	2
A. Dermatology		

1	Anatomy, and functions of the skin	1
2	Histopathology of the skin general terms, main skin lesions	1
3	Bacterial skin infections	1
4	Chronic bacterial infections TB, leprosy	1
5	Fungal infections (Mycoses)	1
6	Viral infections	1
7	Parasitic and protozoal infections, pediculosis, scabies. leishmaniasis	1
8	Eczema, a topic dermatitis	1
9	Contact dermatitis; Allergic and irritant dermatitis	1
10	Reactions to physical agents	1
11	Psoriasis	1
12	Lichen planus, Pityriasis rosea	1
13	Acne, Acneiform rash, Acne rosacea	1
14	Disorders of skin color	1
15	Bullous eruptions	1
16	Urticaria and erythemas	1
17	Hair and its disorders	1
18	Nail and its disorders	1
19	Skin tumors and cutaneous manifestations of internal organs	1
20	Drugs eruptions	1
21	Geno dermatoses	1
22	Skin in systemic diseases, AIDS	1
23	Skin in connective tissue diseases	1
24	Sexually transmitted diseases modes of presentation	1
25	Syphilis and other treponematosis	2
26	Chancroid and other genital ulcers	1
27	Urethral discharge – Gonococcal and non-gonococcal urethritis	1
28	Dermatological therapy: systemic, topical and physical therapies	2

Subject: Psychiatry

5th Year

General Medicine	Number of units: 3 un	Theoretical lectures: 30
		Clinical sessions: 30 hr

Methods of teaching

- ○ Theoretical lectures in the college building halls
- ○ History taking and complete clinical examination on real patients in the outpatient clinics
- ○ Small group teaching

Psychiatry

This course provides a comprehensive introduction to psychiatry, exploring the fundamentals of normal and abnormal human psychology. You will study core mental functions like memory, perception, and thought, and their associated disorders. The curriculum covers the diagnosis and classification of major conditions, including mood disorders like depression and bipolar disorder, psychotic disorders like schizophrenia, anxiety disorders, and cognitive disorders such as dementia. It also addresses personality disorders, somatoform conditions, and the vital role of psychological factors in physical health.

 # 2.3.3.3. Curriculum of Psychiatry

D. Psychiatry

1 Definition and scope of psychology, psychopathology and psychiatry, history of psychology and psychiatry and schools of psychology
2 Instincts, basic needs and motivations
3 Emotions and emotional disorders
4 Memory and memory disorders
5 Perception and disorder of perception
6 Thinking and disorders of thoughts and speech
7 History and mental state examination
8 Mood disorders

- Major depressive disorders, dysthymic disorders, bipolar disorders, cyclothymic disorders
  9 Psychotic disorders
- Schizophrenia, schizophrenia disorders, delusional disorders, shared psychotic disorder, schizoaffective disorders
  10 Neurotic and stress related disorders

- Generalized anxiety disorder, panic disorders, phobic disorder, obsessive compulsive disorders, post-traumatic stress disorder, adjustment disorder
  11 Somatoform disorders
- Conversion disorder, somatization disorder, hypochondriasis, body dysmorphic disorder, pain disorder
  12 Cognitive disorders
- Delirium, dementia, amnestic disorder
  13 Personality and personality disorder
  14 Psychological factors affecting medical condition

Clinical Session Week

#	Session	Duration (Hours)	Instructor(s)	Notes
1	Neurological sessions (Including neurological examination and case approach)	2	Assist. Prof. Dr. Abbas Kinbar	
2	Rheumatology sessions (Including neurological examination and case approach)	2	Dr. Qisma Hussein Alwan	
3	Dermatology sessions (Including neurological examination and case approach)	3	Dr. Sarar Osama & Dr. Rand Hussein	
4	Psychiatry sessions (Including neurological examination and case approach)	3	No senior psychiatrist available currently	Despite all efforts, the position remains unfilled

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Subject: Gynecology

Fifth Year

Course Description

- The branch teaches gynecology for the fifth academic Year by providing theoretical lectures, clinical training, and conducting daily exams.
- Course Objectives:
  - Strive to complete theoretical lectures and clinical training fully.
  - Diversify student assessment methods by varying exam styles.
  - Diligently work to complete the branch's quota of external lecturers to ensure diverse education and training for students.
  -

1. [Course Data]

Course Code	Course Name: Gynecology	Year: Fifth
Gyne.Cl.5th		
Gyne.Th.5th		
Specialization: Gynecology	Credit Hours: 6	Theoretical Hours: 40
		Practical Hours: 20

2. [Course Objective]

[The course aims to prepare students to understand gynecology and its diseases theoretically and practically, and to equip them scientifically to handle all cases they encounter, make sound decisions in solving them, and train them to become skilled doctors to serve society and develop this field.]

3. [Course Outcomes, Teaching/Learning Methods, and Assessment]

- [To prepare skilled doctors in this specialty with the ability to handle health problems.]
  - [Cognitive Objectives:]

1. Introduce students to gynecology and its diseases, including diagnosing medical conditions, treatment methods, future prevention, and cervical cancer prevention.
2. Train students theoretically and practically in gynecology by involving them in gynecology outpatient clinics at the hospital and training in the clinical skills lab.
3. Introduce and train students on the preventive aspect for women through early cervical cancer detection clinic visits and discussing various cases.
4. Provide study opportunities for department assistants to acquire advanced knowledge in this field.

- [Affective and Value Objectives:]

- Qualify students for ethical and optimal interaction with female patients.

[4. Teaching and Learning Methods:]

- Delivering theoretical lectures.
- Training students in the clinical skills lab on various and emergency cases in the subject.
- Training students in the teaching hospital on various gynecological cases, as well as in gynecology consultation clinics at Al-Hakim Teaching Hospital (including infertility clinic) and training them on various contraception methods at the family planning consultation clinic at the Children and Maternity Hospital.
- Seminars.
- Using small group training methods.

[5. Assessment Methods:]

First Semester Exam	10%
Mid-Year Exam	20%
Second Semester Exam	10%
Unexpected Quizzes	(Score included in semester exam)
Final Exam	
Practical	(50%)
Theoretical	(10%)

[6. Course Structure]

Week	Hours	Required Learning Outcomes	Unit/Subject Name	Teaching Method	Assessment Method
First Semester (Weeks 1-15)	20 theoretical hours	3 units	Gynecology	Lectures and clinical training	- First Semester Exam - Mid-Year Exam - Second Semester Exam - Final Practical Exam - Final Theoretical Exam
	10 practical hours				
Second Semester (Weeks 16-30)	20 theoretical hours	3 units	Gynecology	Lectures and clinical training	
	10 practical hours				

[7. Infrastructure]

- Fifth-Year lecture hall.
- Gynecology consultation clinic and infertility clinic at Al-Hakim Hospital.
- College of Medicine library.

[8. Course Textbooks]

Required Textbooks			*Gynecology by Ten Teachers 19th Edition*	
External Sources			*Essential Gynecology & Obstetrics 5th Edition*	
Week	Date	Theoretical Subject	Practical	Lecturers and External Lecturers
1		History and examination in gynecology	Introduction. History in gynecology	Dr. Saba Jassim
2		Anatomy of female genital tract		
3		Menstrual cycle	Examination in gynecology	
4		Disorder of menstrual cycle Cytology	Gynecology outpatient	Dr. Kawthar Issa
5		Dysmenorrhea	Abnormal uterine bleeding management	
6		Polycystic ovarian syndrome	Amenorrhea (1,2)	Dr. Noor Abdul Rasul
7		Infertility 1		Dr. Aseel
8		Infertility 2	Infertility clinic	
9		Assisted reproductive technology		Dr. Shaimaa Abdul Hassan
10		Fibroid Endometriosis	Family planning clinic	
11		Ectopic pregnancy		

		Endoscopy in gynecology		
12		Menopause Postmenopausal bleeding	Gynecological instruments	
13		Normal and abnormal development of genital tract Mullerian agenesis	Gynecology ward (cases)	
14		Gestational trophoblastic disease 1 & 2		
15		Contraception 1 Contraception 2	Cervical smear.	
16		Contraception 3		
17		Puberty	Gynecological infections	
18		Androgen access		
19		Upper genital tract infection	Drugs in gynecology	
20		Lower genital tract infection		
21		Sexually transmitted infections	Genital tract prolapse	
22		Benign disorder of cervix		
23		Recurrent miscarriage Amenorrhea	Gynecological oncology	
24		Urogynecology Genital tract prolapse	Stress incontinence	
25		Benign and malignant tumor of ovary Ovarian tumor during pregnancy		
26		Malignant neoplasm of body of uterus Cervical carcinoma		
27		Benign and malignant neoplasm of vulva Benign and malignant neoplasm of vagina		
28		Hormone therapy in gynecology		

[Course Description Model – Obstetrics and Gynecology Branch – Sixth Year]

[Course Description]

- The branch teaches gynecology and obstetrics for the sixth academic Year through clinical training, daily discussions, and conducting exams.

- Course Objectives:
  - Strive to complete theoretical lectures and clinical training fully.
  - Diversify student assessment methods by varying exam styles.
  - Diligently work to complete the branch's quota of external lecturers to ensure diverse education and training for students.

1. [Course Data]

Course Code	Course Name: Gynecology and Obstetrics	Year: Sixth
Gyn. and obstet.Cl.6th		
Specialization: Gynecology and Obstetrics	Credit Hours: 10	Theoretical Hours:
		Practical Hours: 300

2. [Course Objective]

[The course aims to prepare students to understand gynecology and obstetrics and their diseases theoretically and practically, and to equip them scientifically to handle all cases they encounter, make sound decisions in solving them, and train them to become skilled doctors to serve society and develop this field.]

3. [Course Outcomes, Teaching/Learning Methods, and Assessment]

- [To prepare skilled doctors in this specialty with the ability to handle health problems.]
  - [Cognitive Objectives:]

1. Introduce and help students understand gynecology and obstetrics and their diseases, including diagnosing medical conditions, treatment methods, and future prevention.
2. Train students theoretically and practically in gynecology and obstetrics by involving and training them in gynecology and obstetrics wards, gynecology outpatient clinics at the hospital, and training in the clinical skills lab at the college.

  - [Affective and Value Objectives:]

- Qualify students for ethical and optimal interaction with female patients.
- Encourage students to train in the ward in groups.
- Develop teamwork and cooperation spirit among them.

- Enhance their ability to find solutions to problems they face in the work environment.

[4. Teaching and Learning Methods:]

- Delivering theoretical lectures.
- Training students in the clinical skills lab on various and emergency cases in the subject.
- Training students in the teaching hospital on various gynecological and obstetric cases.
- Discussing various cases and seminars.
- Training students in delivery rooms and operating rooms.
- Using small group training methods.

[5. Assessment Methods:]

End of Course Practical Exam	20%
Final Exam	
Practical	(40%)
Theoretical	(40%)

[6. Course Structure]

Week	Hours	Required Learning Outcomes	Unit/Subject Name	Teaching Method	Assessment Method
Practical Course (10 weeks per group) (4 groups)	300 hours (6 hours per session)	10 units	Gynecology and Obstetrics	Clinical training and seminars	- End of Course Practical Exam - Final Exam - Practical - Theoretical

[7. Infrastructure]

- Clinical skills lab hall at the college.
- Clinical training at Al-Hakim Teaching Hospital – Gynecology and Obstetrics Ward, and the Children and Maternity Hospital.
- Delivery rooms at Al-Hakim Teaching Hospital.
- Operating room at Al-Hakim Hospital.
- Library.

[8. Course Textbooks]

Required Textbooks	*Gynecology & Obstetrics by Ten Teachers 19th Edition*
External Sources	*Essential Gynecology & Obstetrics 5th Edition*

Subject: Ophthalmology
Fifth Year

الفصل الدراسي	عدد الساعات النظري	عدد الساعات السريري
الفصل الأول	ساعة 30	ساعة 24
الفصل الثاني	ساعة 30	ساعة 24

1. **Refractive errors (**The optical system of the eye, myopia, hyperopia, astigmatism, anisometropia, accommodation, presbyopia, contact lenses).
2. **Eye lid disorders (**trichiasis, allergic eye lid diseases, eye lid infection - herpes simplex, herpes zoster, benign nodules and cysts, chalazion, stye, marginal blepharitis, malignant tumors - basal cell carcinoma, squamous cell carcinoma, melanoma, ectropion, entropion, ptosis)
3. **Orbital eye disorders (**Trauma orbital hemorrhage, blow out fracture, Infection: orbital cellulitis, preseptal cellulitis, Tumours: rhabdomyo-sarcoma, cavernous hemangioma, thyroid eye disease)
4. **Conjunctival diseases (**Applied anatomy ; bacterial conjunctivitis; viral conjunctivitis; chlamydial conjunctivitis; allergic conjunctivitis; conjunctival degenerations; pigmented conjunctival lesions; non pigmented conjunctival tumours).
5. **Corneal and sclera diseases I (**Applied corneal anatomy; bacterial keratitis; fungal keratitis; herpes simplex keratitis; herpes zoster keratitis; corneal abrasion; corneal laceration; corneal foreign body; chemical corneal injury; keratoconus).
6. **Glaucoma (**Definition; aqueous pathophysiology; tonometry; gonioscopy; optic nerve assessment; visual field assessment; primary open angle glaucoma; primary narrow angle glaucoma; congenital glaucoma; glaucoma medical therapy; laser in glaucoma).
7. **Retinal detachment (**Applied anatomy, rhegmatogenous retinal detachment, tractional retinal detachment, exudative retinal detachment, treatment of retinal detachment).

8. **Corneal and sclera diseases II (**Exposure keratopathy, keratoconjunctivitis sicca, keratoplasty, refractive surgical procedures, episcleritis, scleritis).
9. **Retinal vascular diseases I (**Diabetic retinopathy, Central retinal vein occlusion, Branch retinal vein occlusion, Amaurosis fugax, Central retinal artery occlusion).
10. **Crystalline lens disorders (**Pathogenesis of cataract, causes of cataract, types of cataract surgery, congenital cataract, Ectopia lentis).
11. **Retinal diseases II (H**ypertensive retinopathy, retinitis pigmentosa, Age related macular degeneration, myopic maculopathy).
12. **Uveitis (A**natomical classification, clinical classification, etiological classification, clinical features, differential diagnosis, complications, treatment, Hyphema)
13. **Neuroophthalmology I (O**ptic neuritis, optic atrophy, anterior ischemic optic neuropathy, compressive optic neuropathy, alcohol tobacco amblyopia, papilledema).
14. **Lacrimal diseases (**Applied anatomy, congenital nasolacrimal duct obstruction, dacryocystitis, canaliculitis).
15. **Neuroophthalmology II (**Oculomotor nerve palsy, Abducent nerve palsy, Trochlear nerve palsy, drug induced optic neuropathy).
16. **Intraocular tumors (**Retinoblastoma, Choroidal melanoma, Metastatic carcinoma).
17. **Eye trauma (**Terminology of eye trauma, general outlines of treatment, Blunt trauma, anterior segment complications of blunt trauma, posterior segment complications of blunt trauma, Penetrating trauma).
18. **Squint (**Introduction, infantile esotropia, accommodative esotropia, exotropia, exophoria, hypertropia, hypotropia).
19. **Laser in ophthalmology (**Properties of laser light, Laser tissue interaction, Choice of laser wavelength).

Subject: Radiology
Fifth Year

عدد ساعات المقرر الدراسي: الفصل الأول والثاني

المادة	النظري	السريري
الفصل الأول	ساعة 30	ساعة 24
الفصل الثاني	ساعة 30	ساعة 24

1. Introduction

a) Aims & objectives of radiology.
b) The imaging department.

c) Basic principles of X-ray, ultrasound, radio-nuclide imaging, CT & MRI.
d) Indications, limitations, & contraindications of x-ray, ultrasound, radionuclide imaging, CT & MRI.
e) Contrast medium used in radiology.
f) X-ray hazards & radiation protection.

2. Respiratory system I, II, III

a) Radiological anatomy of the lungs.
b) Investigations in chest diseases.
c) Chest x-ray technique & procedure, interpretation of normal chest x-ray.
d) Diseases of the chest with normal chest x-ray.
e) Radiological signs of lung disease (Silhouette sign, air space filling, pulmonary collapse, spherical shadows, cavitation, calcification, hilar enlargement, line & widespread shadows).
f) Diseases of the pleura.
g) Diseases of the mediastinum.
h) specific lung diseases (pneumonia, Lung abscess, Pulmonary TB, Pulmonary Hydatid, Diseases of the airway, Pulmonary embolism, Bronchogenic carcinoma, Pulmonary metastases, Pulmonary lymphoma, RDS & ARDS, Chest trauma, Radiation pneumonitis, Cystic fibrosis).
i) Diseases of the diaphragm.

3. The cardio-vascular system I, II

a) Investigations of the cardiovascular system.
b) Radiological evidence of heart disease: (Heart size & shape, evidence of pericardial disease, pulmonary vessels).
c) Specific heart disease (Heart failure, Valvular heart disease, ischemic heart disease, congenital heart disease).
d) Diseases of the aorta.
e) Dextrocardia.

4. Plain abdomen

a) General considerations.
b) Normal findings in plain abdominal films.
c) Interpretation of abnormal plain abdominal film: (Bowel dilatation, Gas outside bowel lumen, Ascitis, Abdominal calcifications).

5. Gastro-intestinal tract I, II

a) Normal radiographic anatomy.
b) Types of contrast study of the GIT
c) Specific radiological terms in GIT diseases.

d) Diseases of the esophagus.
e) Diseases of the stomach small bowel.
f) Diseases of the large bowel.

6. Liver, spleen & pancreas

a) Normal radiographic anatomy & investigations of hepatobiliary system.
b) Diseases of the liver & biliary system.
c) Radiological investigations of the spleen.
d) Radiological investigations & diseases of the pancreas.

7. Peritoneal cavity & retroperitonium

a) Diseases of the peritoneum (ascitis, peritoneal tumors, intra-peritoneal abscesses)
b) Investigations of the retro-peritoneum.
c) Diseases of the retro-peritoneum (retro-peritoneal lymphadenopathy, disease of the adrenal gland, retro-peritoneal tumors, aortic aneurysm, retro-peritoneal hematoma, retro-peritoneal & psoas abscesses)

8. Urinary tract I, II

a) Investigations of the urinary tract
b) Urinary calculi & Nephrocalcinosis.
c) Urinary tract obstruction.
d) Renal paranchymal masses (simple renal cyst, Angiomyolipioma, Renal cell carcinoma).
e) Urothelial tumor.
f) Infection (acute & Emphysematous pyelonephritis, Renal & perinephric abscess, Pyonephrosis, Renal TB, Chronic pyelonephritis).
g) Vesico-ureteric reflux.
h) Renal trauma.
i) Chronic renal failure.
j) Congenital variation of the urtinary tract.
k) Diseases of the UB, diseases of the prostrate, diseases of the Urethra.
l) Diseases of the Sacrotum & testes.

9. Female genital tract

a) Investigations & normal radiographic anatomy.
b) Specific diseases of the female genital tract (ovarian masses, uterine masses, pelvic inflammatory disease, endometriosis).
c) Ultrasound appearance of normal uterine pregnancy.
d) Ectopic pregnancy.

10. Breast imaging

a) Investigations of breast.
b) Normal radiographic anatomy.
c) Specific diseases of the breast (simple cyst, fibroadenoma, breast carcinoma).

11. Radiology of bone diseases I, II, III

a) Plain radiographic Signs of bone diseases
b) Classification of bone diseases.
c) Radiological assessment of solitary bone lesion.
d) Malignant bone tumors: (Osteosarcoma, Chondrosarcoma, Ewing s sarcoma, Giant cell tumor).
e) Benign tumors & tumor like lesion.
f) Bone infection (Osteomeylitis, TB).
g) Multiple focal bone lesions (bone metastases & multiple myeloma).
h) Generalized decrease in bone density.
i) Generalized increase in bone density.
j) Acromegally.
k) Radiology of bone trauma.

12. Radiology of joint diseases

a) Imaging techniques of joint diseases.
b) Plain radiographic Signs of joint diseases
c) Arthritis (rheumatoid arthritis, osteoarthritis, pyogenic arthritis).
d) Avascular necrosis.

13. Radiology of the spine I, II

a) Imaging investigations of the spine
b) Anatomical review.
c) Plain radiographic Signs of spinal abnormality.
d) Specific diseases of the spine: (Metastases, lymphoma & Myeloma, spinal infection, spinal trauma, degenerative disc disease, Spinal stenosis, Ankylosing spondylitis, Spinal dysraphysim, spinal cord compression).

14. Skull & brain I, II

a) Imaging investigations of the skull & brain
b) Normal radiographic anatomy of the skull & brain.
c) Specific brain disorders: (brain tumors, stroke, infection, multiple sclerosis).
d) Radiology of head injury.

15. Sinuses, orbit & neck I, II

a) Imaging techniques & diseases of the para-nasal sinuses.
b) Imaging techniques & diseases of the orbit.
c) Imaging techniques & diseases of the salivary glands.

d) Imaging techniques & diseases of the thyroid & para-thyroid gland.

16. Angiography

a) Definition, indications, principles & complications of arteriograpy.
b) Indications of venography.
c) Specific vascular disorders (Aneurysms, Atheroma, arterio-venous fistula & malformation, Stenosis & Fibromuscular hyperplasia, Thrombosis & Embolism, vascular Tumors).

17. Interventional radiology

a) Vascular interventional procetures.
b) Percutaneous needle biopsy.
c) Percutaneous drainage of abscess & fluid collections.
d) Interventions in urinary obstruction.
e) Interventions in biliary obstruction.

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Subject: ENT

Fifth Year

عدد ساعات المقرر الدراسي: الفصل الأول والفصل الثاني

الفصل الدراسي	الساعات النظري	الساعات السريري
الفصل الأول	30 ساعة	24 ساعة
الفصل الثاني	30 ساعة	24 ساعة

1. Surgical anatomy and applied physiology of the nose paranasal sinses.
2. Radiology and endoscopy of the nose and paranasal sinuses.
3. Congenital malformation and injuries of the nose and paranasal sinuses.
4. Infection of the nose and paranasal sinuses and their management
5. Nasal allergy and vasomotor rhinitis.
6. Epistaxis.
7. Tumors of the nose and paranasal sinuses.
8. Surgical anatomy and applied physiology of pharynx and esophagus.
9. Inflammation of the mouth and pharynx.
10. Ulcers.
11. Tonsillitis and Adenoid is-Adenoid hyper atrophy.
12. Tonsillitis and Adenoidectomy, indications and complications.
13. Tumors of the nasopharynx and hypopharynx-Dyspagia.

14. Surgical anatomy and applied of the Larynx.
15. Congenital malformations and injuries of the Larynx.
16. Acute and chronic Laryngitis.
17. Hoarseness.
18. Stridor.
19. Tumors of the Larynx.
20. Lump in the Neck.
21. Surgical anatomy of the ear –labyrinth.
22. Physiology of hearing and vestibular system.
23. Hearing impairment and audio logical assessment.
24. Vertigo and neurological assessment
25. Congenital malformation, trauma and neoplasm of the ear.
26. Otitis media Acute, chronic and secretory.
27. Complications of the middle ear infections
28. Principles of middle ear surgery.
29. Otosclerosis.
30. Mienier's disease.
31. Benign paroxysmal positional vertigo (B.P.P.V)
32. Vestibular neuronitis

Subject: Anesthesia

Fifth Year

عدد ساعات المقرر الدراسي: الفصل الأول والثاني

الفصل الدراسي	الساعات النظري	الساعات السريري
الفصل الأول	ساعات 7	ساعات 8
الفصل الثاني	ساعات 7	ساعات 8

1. History of anaesthesia ,and Preparation for anaesthesia
2. Preoperative investigation
3. Preoperative evaluation and management
4. Preoperative drugs and treatment
5. General anaesthesia
6. Management of the airway during anaesthesia General
7. Haemostasis and blood pressure control

8. Monitoring during anaesthesia
9. Recovery from general anaesthesia
10. Management of blood pressure in the recovery room (hypo and hypertension)
11. Local anaesthesia
12. Perioperative pain relief (acute pain management
13. Post-operative pain management
14. Chronic pain relief .

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Subject: Orthopedic

Fifth Year

عدد ساعات المقرر الدراسي: الفصل الأول والثاني

الفصل الدراسي	الساعات النظري	الساعات السريري
الفصل الأول	60 ساعة	24 ساعة
الفصل الثاني	60 ساعة	24 ساعة

1. <u>Fractures and Joint Injuries</u>

1. The management of major injuries
2. Principle of fractures.
3. Injuries of the shoulder, upper arm and elbow.
4. Injuries of the forearm and wrist.
5. Hand injuries.
6. Injuries of the spine.
7. Injuries of the pelvis.
8. Injuries of the hip and femur.
9. Injuries of the knee and leg.
10. Injuries of the ankle and foot.

2. <u>General Orthopedics</u>

1. Orthopedic diagnosis.
2. Infection.
3. Rheumatic disorders.
4. Crystal deposition disorders.

5. Osteoarthritis.
6. Osteonecrosis and related disorders

3. <u>Orthopedic surgery</u>

1. Acute Osteomyelitis
2. Genetic disorders
3. Rheumatic disorders
4. Hand congenital and acquired deformities
5. Neuromuscular disorders
6. Congenital foot deformities
7. Chronic Osteomyelitis
8. Crystal deposition disorders
9. Peripheral nerve injuries
10. Wrist disorders
11. Metabolic and endocrine disorders
12. Elbow disorders
13. Hip disorders
14. Bone Tumors
15. Shoulder and pectoral girdle disorders
16. Bone Tumors
17. Hand disorders
18. Cervical disorders
19. Scoliosis and kyphosis
20. Knee disorders
21. Intervertebral disc prolapsed
22. Orthopedic operations
23. Knee joint swelling
24. Hand infections
25. Torticolis
26. Deformities of toes
27. Soft tissue tumors
28. Ankylosing spondylitis
29. Spondylolysthesis

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Cardiothoracic surgery lectures

Year: 5th

عدد ساعات المقرر الدراسي: الفصل الأول والثاني

الفصل الدراسي	الساعات النظري	الساعات السريري
الفصل الأول	15 ساعة	16 ساعة
الفصل الثاني	15 ساعة	16 ساعة

1. Chest wall, pleura, lung, and mediastinum:(Anatomy,Thoracic Incisions, Thoracic Injuries, Conditions Requiring Urgent Correction, Dangerous But Less Compelling Injurie, Congenital Deformities, Chest Wall Tumors
2. Diseases of the Pleura and Pleural Space : Pleural Effusion, Tumors
3. Lung: Anatomy, Diagnostic Modalities, Congenital Lung Lesions, Pulmonary Infections ,Tumors(Primary Carcinoma, Solitary Pulmonary Nodules, Other Lung Tumors)
4. Trachea: Congenital Lesions, Trauma, Neoplasms
5. Mediastinum: Tumors and Cysts, Mediastinitis , Superior Vena Caval Obstruction
6. Cardiac surgery: Cardiopulmonary bypass, Congenital heart disease, Acquired heart disease (valvular heart diseases and ischaemic heart diseases) , Valves replacement surgery and Cardiac pacemaker, Cardiac transplantation and cardiac tumours
7. Pericardium: anatomy and physiology, pericardial effusion, constrictive pericarditis and pericardiocentesis
8. Investigations of vascular diseases
9. Aneurysmal diseases
10. Thoracic aortic dissection
11. Occlusive disease (Atherosclerosis and Vasculitis)
12. Vascular embolism
13. Arteriovenous fistulas
14. Vascular trauma
15. Vasospastic disorders (Raynaud's phenomenon and Vibration white finger).

❖ Maxillofacial surgery lectures

عدد ساعات المقرر الدراسي: الفصل الأول و الثاني: نظري=
6 ساعة

1. Maxillofacial injuries
2. Orthopantomography, mandibular dislocation and Developmental abnormalities of the teeth
3. Swellings of the jaw
4. Infections in Maxillofacial surgery
5. Congenital anomalies of the face, lips and palate (cleft lip and cleft palate)
6. Oral cavity disorders: congenital anomalies, ranula, dermoid cyst and stomatitis
7. Premalignant conditions of oral cavity and oral and aerodigestive cancers
8. Tongue disorders: tongue ulcers, fissures, tongue tie, glossitis and tongue tumours

❖ Neurosurgery

عدد ساعات المقرر الدراسي: الفصل الأول و الثاني

نظري= 8 ساعة .... سريري= 16 ساعة :

1) Management of head injuries: surgical anatomy. Aetiology, mechanisms of brain injury, types, pathology, treatment and complications.
2) Management of specific types of head injuries: Scalp injuries, skull fractures, intracranial haemorrhage and brain injuries
3) Hydrocephalus: Definition, aetiology, classification, pathophysiology, investigations, treatment, prognosis and complications
4) Common congenital anomalies in neurosurgery
5) Intracranial infections and cavernous sinus thrombosis
6) Management of increase intracranial pressure
7) Management of brain tumours
8) Management of spinal cord tumours
9) Spines injuries, Disc prolapse and Tb spines
10) Peripheral nerve injuries

❖ Plastic surgery:

عدد ساعات المقرر الدراسي: الفصل الأول و الثاني: نظري=
2 ساعة ....

1) Spectrum and principles of plastic surgery, methods and principles of wounds closure
2) Principles of skin coverage (skin graft, flaps, tissue expander, skin substitutes, vacuum assisted wound closure
3) Aesthetic surgery

❖ **Disaster surgery:**

1) Common features and types of disaster, Preparation for Mass Casualty, Factors influencing rescue and relief efforts, Sequence of the relief effort in major disasters
2) Triage, field hospital, damage control surgery
3) Wound debridement, Compartment syndrome and crush syndrome

Subject: Pediatrics

Fifth Year

Fifth Year Pediatrics Curriculum divided into First Semester and Second Semester, with topics organized into a weekly schedule (3 theory hours/week per semester). Emergency cases (BLS, neonatal resuscitation) are integrated where relevant.

First Semester (45 Hours)- Second Semester (45 Hours)

Week	Topic	Sub-Contents
1	Iron Deficiency Anemia	Microcytic anemia, ferritin levels, supplementation
2	Thalassemia & Sickle Cell Anemia	Transfusion protocols, hydroxyurea, crises
3	Bleeding Disorders (Hemophilia, ITP)	Factor replacement, DDAVP, platelet transfusion

4	Febrile Seizures	Risk factors, lumbar puncture indications
5	Diabetic Ketoacidosis (DKA)	Fluid resuscitation, insulin drip, cerebral edema
6	Cerebral Palsy & Autism	Early signs, multidisciplinary management
7	Hemolytic Uremic Syndrome (HUS)	STEC, renal replacement therapy
8	Nephrotic Syndrome	Steroid-responsive vs. resistant, relapse management
9	Pediatric Poisoning	Activated charcoal, antidotes (e.g., Naloxone)
10	Genetics (Down Syndrome, Metabolic Disorders)	Karyotyping, newborn screening
11	Review & Case Simulations	BLS/NRP refresher, mock codes (neonate/child)

Fifth Year Pediatrics Curriculum (90 Hours)

First Semester (45 Hours – Neonatology & Core Pediatrics) curriculum map

Week	Topic	Knowledge	Skills	Attitudes
1	Introduction to Neonatology	Definitions, neonatal mortality rates, high-risk populations	–	Awareness of socioeconomic impacts
2	Preterm Baby & Newborn Assessment	Gestational age assessment, APGAR scoring, complications of prematurity	Ballard scoring, preterm physical exam	Empathy for parental anxiety
3	Routine Delivery Room Care	Delayed cord clamping, thermal care, breastfeeding benefits	Newborn resuscitation setup	Advocacy for evidence-based practices
4	Respiratory Distress Syndrome	Pathophysiology of RDS vs. TTN, surfactant therapy	Oxygen saturation monitoring	Collaboration with NICU teams
5	Meconium Aspiration	Prevention strategies, PPHN	Intubation simulation	Urgency in critical

Week	Topic	Knowledge	Skills	Attitudes
	Syndrome	management		situations
6	Hypoxic-Ischemic Encephalopathy	Staging, therapeutic hypothermia, long-term outcomes	Neurological exam (tone, reflexes)	Compassion for family counseling
7	Neonatal Sepsis & Meningitis	Early vs. late-onset sepsis, CSF interpretation	Lumbar puncture technique	Vigilance for subtle symptoms
8	Hyperbilirubinemia	Kernicterus risk, phototherapy thresholds, exchange transfusion	Transcutaneous bilirubin measurement	Advocacy for timely treatment
9	Necrotizing Enterocolitis	Bell's staging, surgical indications	Abdominal exam (pneumatosis)	Teamwork in surgical emergencies
10	Congenital Anomalies	Diaphragmatic hernia (ECMO), omphalocele management	–	Ethical discussions on viability
11	Infant of Diabetic Mother	Hypoglycemia monitoring, macrosomia risks	Glucose heel sticks	Support for maternal education
12	Neonatal Seizures	Etiologies, antiepileptic choices	Seizure observation/documentation	Calmness in acute events
13	Cyanotic/Acyanotic CHD	TOF, VSD, PDA pathophysiology, Eisenmenger syndrome	Cardiac auscultation	Empathy for chronic illness
14	Rheumatic Fever & Endocarditis	Jones criteria, antibiotic prophylaxis	Joint exam (migratory arthritis)	Prevention-focused mindset

Week	Topic	Knowledge	Skills	Attitudes
15	Asthma & Allergy	GINA guidelines, spacer use, allergen avoidance	Peak flow meter teaching	Empowerment for self-management

Second Semester (45 Hours – Systemic & Chronic Conditions) curriculum map

Week	Topic	Knowledge	Skills	Attitudes
1	Iron Deficiency Anemia	Microcytic anemia, ferritin interpretation, dietary sources	Peripheral smear analysis	Advocacy for nutrition programs
2	Thalassemia & Sickle Cell	Transfusion protocols, hydroxyurea, crisis management	Pain assessment tools	Compassion for chronic pain
3	Bleeding Disorders	Hemophilia (factor replacement), ITP (steroids/IVIG)	Bleeding time tests	Support for lifelong treatment
4	Febrile Seizures	Risk factors, meningitis vs. benign causes	LP indications	Reassurance for parents
5	Diabetic Ketoacidosis	Fluid/electrolyte management, insulin protocols	ABG interpretation	Multidisciplinary teamwork
6	Cerebral Palsy & Autism	Early signs, multidisciplinary interventions	Developmental screening (Denver II)	Advocacy for inclusive education
7	Hemolytic Uremic Syndrome	STEC pathogenesis, renal replacement criteria	Urinalysis for hematuria	Public health awareness
8	Nephrotic Syndrome	Steroid responsiveness, relapse prevention	24-hour urine protein collection	Patience with relapsing conditions
9	Pediatric Poisoning	Common toxins, antidotes (e.g., naloxone)	Activated charcoal administration	Prevention counseling

Week	Topic	Knowledge	Skills	Attitudes
10	Genetic Disorders	Down syndrome features, newborn screening interpretation	Dysmorphology exam	Non-judgmental genetic counseling
11	Review & Case Integration	Synthesis of neonatal/childhood conditions	Case-based discussions	Holistic patient-centered care

Clinical Practice Course Outline - 5th Academic Year

Day	Focus Area	Topic / Activity
1	Foundational Skills	History Taking and Presentation
2	Foundational Skills	History Taking and Presentation
3	Foundational Skills	History Taking and Presentation
4	Foundational Skills	History Taking and Presentation
5	Foundational Skills	General Examination
6	Foundational Skills	General Examination (Continued)
7	System-Specific Examination	Respiratory Examination
8	System-Specific Examination	Respiratory Examination (Continued)
9	System-Specific Examination	Abdominal Examination
10	System-Specific Examination	Abdominal Examination (Continued)
11	System-Specific Examination	Cardiovascular Examination
12	System-Specific Examination	Cardiovascular Examination (Continued)
13	Specialized Assessments	Neonatal Examination
14	Specialized Assessments	Neonatal Examination (Continued)
15	System-Specific Examination	Central Nervous System (CNS) Examination
16	System-Specific Examination	CNS Examination (Continued)
17	Specialized Assessments	Nutritional Assessment
18	Specialized Assessments	Dehydration Assessment
19	Acute Care & Integration	Casualty Unit Short Cases Examination
20	Final Evaluation	Clinical Examination / Consolidation

Course Details:

- **Duration:** 4 weeks
- **Schedule:** 5 days per week, 2 hours per day
- **Total Contact Hours:** 40 hours
- **Progression:** Building from basic communication skills to complex system examinations and acute care scenarios

Methods of assessment

2. Assessments

o Formative: Simulations, role-playing during clinical training

o Summative: OSCEs, OSPE, Slide examination

NO.	Exam	type of assessment	Marks
1	1st. term	Written Exam(Mcqs+essay & essay questions	10
2	Mid-year	Written examination (Total Mcqs)	20
3	2nd term	Written examination (mcqs& essay questions)	10
4	Post clinical training exam	Clinical cases (history and examination) on true patients or manikins	10
5	Annual examination quest السعي السنوي		40
6	Final written examination	Written examination (mcqs in form of cases)	60
7	Total		100

Suggested Reading List:

1. Nelson Textbook of Pediatrics
2. Essentials of pediatrics.
3. Various internet related subjects.
4. Assigned Readings.

Curriculum of the Fourth academic year			
No.	Components	Duration	Unit
1st semester	Theoretical lectures	45 hrs.	3
2nd semester	Theoretical lectures	45hrs.	3
Clinical practice	History &clinical examination (general & systemic examination)	30 hrs.	2
Total		120 hrs.	8 units

Places of completion the curriculum:

1. Lecture hall in the college
2. Small teaching group in the college & at Misan teaching for maternity and child hospital
3. Skill lab in the college
4. Emergency department in Misan teaching for maternity and child hospital
5. Pediatrics out-patient clinics in Misan teaching for maternity and child hospital
6. Pediatrics inpatient ward in Misan teaching for maternity and pediatrics hospital
7. Premature unit in Misan teaching for maternity and pediatrics hospital

Educational program
6th Year

Subject: Internal Medicine

Category	Details
Course Code	Med.CL6th
Course Name	Internal Medicine
Year	Sixth Year
Field	General Medicine
Number of Units	11 units
Theoretical Lectures	Not specified
Clinical Sessions	330 hours

2.4.2. Methods of Teaching

- History taking and complete clinical examination on real patients in the outpatient clinics.
- Seminars, slides discussion, and problem-solving sessions.
- Small group teaching.

2.4.3. Clinical sessions

Clinical sessions (10 weeks – 5 days a week)

Each session

- Discussion of a case history
- Discussion of a clinical and examination findings
- Approach to the diagnosis and management of the case
- Supplementary (seminar, ECG, X rays, slides …etc.)
- ICU and emergency department visits
- Observation of medical procedure (ECG, IV canula, Suturing …etc.)
- Below the list of important topic need to be discuss to each group and should include in the logbook

System	Condition
Cardiac	Ischemic heart disease
	Heart failure (acute vs chronic)
	Arrhythmia (including Atrial Fibrillation)
Pulmonary	Asthma vs COPD
	Community acquired pneumonia
	Pulmonary embolism and DVT
	Pneumothorax

Gastro-intestinal	Upper GI bleeding
	Chronic liver disease
	Jaundice
	Diarrhea
	Ascites
Central Nervous System	Stroke
	Seizure
	Meningitis
Renal	Chronic kidney disease
	Acute kidney injury
Endocrine	Diabetic ketoacidosis
	Hyperkalemia and hypercalcemia
	Addisonian crises
Other	Anemias
	Fever
	Weight loss

○ **6th year marks distribution**

Assessment Component	Marks Distribution	Notes
End of clinical course (12 weeks training)	20%	○ OSCE examination ○ Log book ○ Attendance ○ Daily activities
Final examination – written part	40%	Comprehensive Multiple-choice questions arrange by the ministry of higher education
Final examination – Clinical part	40%	A through practical clinical examination conducted as OSCE station, include ○ History taking station ○ Two clinical examination station ○ Oral station ○ Slide examination

Subject: Gynecology & Obstetrics

Year: Practical Training Program (6th Year)

1st Week	Activity	Time
Day 1	Arrival, orientation. Review obstetrics history.	8.00-2.00
Day 2	Learning Gravida, para, abortion. Learning calculation of EDD & GA	
Day 3	Labor room (write on one case, no. of deliveries, episiotomy, instruments, cs, curettage). Tutorial: assessment of fetal wellbeing (pregnancy, labor)	
Day 4	Operating room (write on one case, no. of cs & other operations). Tutorial: prenatal diagnosis.	
Day 5	Skill lab. (obstetric examination). Tutorial: oligohydramnios, polyhydramnios.	
2nd Week		
Day 1	Clinical session. Tutorial: fetal malpresentation.	
Day 2	Skill lab. (fetal presentations, mech. of labour). Tutorial: antepartum hemorrhage.	
Day 3	Operating room. Tutorial: twin, post term pregnancy.	
Day 4	Labor room. Tutorial: IUGR, IUD.	
Day 5	Clinical session. Review of logbook. quiz.	
3rd Week		
Day 1	Operating theatre. Tutorial: Rhesus isoimmunization.	
Day 2	Skill lab. (instruments in obstetrics, forceps, ventouse, partograph). Tutorial: miscarriage, termination of pregnancy.	
Day 3	Labor room. Tutorial: perinatal infections.	
Day 4	Clinical session. Tutorial: ectopic pregnancy, H. mole.	
Day 5	Clinical session. Review logbook. quiz.	
4th Week		
Day 1	Clinical session. Tutorial: hypertensive disorders in pregnancy.	
Day 2	Operating theatre. Tutorial: diabetes during pregnancy.	
Day 3	Labor room. Tutorial: heart disease in pregnancy.	
Day 4	Skill lab.: assessment of fetal wellbeing, CTG. Tutorial: UTI, epilepsy.	
Day 5	Clinical session. Review logbook. Quiz.	
5th Week		
Day 1	Operating theatre. Tutorial: anemia during pregnancy.	

Day 2	Clinical session. Tutorial: asthma during pregnancy.	
Day 3	Labor room. Tutorial: liver disease during pregnancy.	
Day 4	Skill lab.: instruments in gynecology. Tutorial: thyroid disease.	
Day 5	Clinical session. Review log book. Quiz.	
6th Week		
Day 1	Clinical session. Tutorial: preterm labor, PROM.	
Day 2	Skill lab: drugs in obstetrics & gynecology. Tutorial: labour (Years Mx, partogram, CTG).	
Day 3	Operating theatre. Tutorial: poor progress in labour, fetal distress.	
Day 4	Labor room. Tutorial: Cesarean section, postoperative complications.	
Day 5	Clinical session. Review of logbook. Quiz.	
7th Week		
Day 1	Clinical session. Tutorial: obstetric emergency.	
Day 2	Skill lab. slides. Tutorial: puerperium.	
Day 3	Operating room. Tutorial: amenorrhea.	
Day 4	Labor room. Tutorial: abnormal uterine bleeding.	
Day 5	Clinical session. Review logbook. Quiz.	
8th Week		
Day 1	Operating room. Tutorial: polycystic ovarian syndrome.	
Day 2	Clinical session. Tutorial: menopause.	
Day 3	Skill lab.: investigations in obstetrics and gynecology, SD. Tutorial: postmenopausal bleeding.	
Day 4	Labour room. Tutorial: lower genital tract infection.	
Day 5	Clinical session. Review of logbook. Quiz.	
9th Week		
Day 1	Operating room. Tutorial: upper genital tract infection.	
Day 2	Clinical session. Tutorial: contraception.	
Day 3	Skill lab. postpartum hemorrhage management. Tutorial: infertility.	
Day 4	Labour room. Tutorial: uterine fibroid, uterine malignancy.	
Day 5	Clinical session. Review of logbook. Quiz.	
10th Week		
Day 1	Clinical session. Tutorial: disease of ovary.	
Day 2	Clinical session. Tutorial: premalignant & malignant disease of cervix.	
Day 3	Skill lab. Review. Tutorial: urogynecology.	
Day 4	Labour room. Tutorial: pelvic organ prolapse.	
Day 5	Clinical session. Review of logbook. Quiz.	

OSCE		

Lecturers and External Lecturers

Day	Lecturer Name	Sequence
Sunday	Dr. Ghasaq Kamil Abdul Wahid	1
Monday	Dr. Khazaal Marjaa Tarrar / Dr. Noor Abdul Rasul	2
Tuesday	Dr. Kawthar Issa Yasin	3
Wednesday	Dr. Rasha Hatem / Aseel Abdul Ali	4
Thursday	Dr. Shaimaa Abdul Mohsen	5

Subject: Pediatric
Year: 6th

Sixth Year Pediatrics weekly Schedule
Total Hours: 300 (6 hours/day, 5 days/week)

Days of the week	8.5 am -9.5 am Daily report	9.5-11.5 am Inpatient cases& outpatient cases	11.5 am -2.00pm Small group teaching discussion & Formative quiz	
Sunday	Dr.	Dr:	Dr:	
Monday	Dr:	Dr:	Seminar :	
Tuesday	Dr:	Dr:	Dr:	
Wednesday	Dr:	Dr:	Seminar:	
Thursday	Dr:	Dr: Emergency cases		Quiz& role-play

Places of completion the curriculum:
1. Lecture hall in the college
2. Small teaching group in the college & at Misan teaching for maternity and child hospital
3. Skill lab in the college
4. Emergency department in Misan teaching for maternity and child hospital
5. Pediatrics out-patient clinics in Misan teaching for maternity and child hospital

6. Pediatrics inpatient ward in Misan teaching for maternity and pediatrics hospital
7. Premature unit in Misan teaching for maternity and pediatrics hospital

Material used for completion the curriculum:

1. Real patient
2. Manikins
3. Power point presentation.
4. Radiological films of patients (Plain X-ray, CT scan and MRI films)
5. Diagrams and posters
6. Clinical video tapes and movies.
7. Laboratory investigations of patients.

Week	Seminar Topic	Knowledge	Skills	Attitudes	Practice Setting
1	Failure to Thrive (FTT)	Etiologies (organic/non-organic), growth charts, nutritional deficiencies	Anthropometric measurements, dietary history taking	Empathy for socioeconomic factors, family-centered counseling	SGT hall in college & Outpatient clinic, Nutrition unit
1	Fluid Therapy	Dehydration types, electrolyte imbalances, IV fluid calculations	IV line placement, fluid resuscitation planning	Precision in calculations, teamwork in emergencies	SGT in college &ER, Inpatient wards
2	Short Stature	Differential diagnosis (GH deficiency, familial), hormonal workup	Tanner staging, growth hormone stimulation tests	Sensitivity to psychosocial impact	SGT in college &Endocrine clinic
2	Tuberculosis	Pediatric TB presentation, Mantoux test interpretation, DOTS protocol	Sputum collection, contact tracing	Advocacy for vaccination, stigma reduction	SGT in college &TB clinic, Community health centers
3	Anemia Approach	Microcytic vs. macrocytic anemia, lab	Peripheral smear analysis, bone marrow	Critical thinking in differential diagnosis	SGT in college &Hematology lab, Ward rounds

Week	Seminar Topic	Knowledge	Skills	Attitudes	Practice Setting
		interpretation (CBC, ferritin)	aspiration (simulation)		
3	SLE	Diagnostic criteria (ANA, anti-dsDNA), renal involvement	Joint examination, lupus rash identification	Multidisciplinary collaboration (nephrology/rheumatology)	SGT in college &Rheumatology clinic
4	Malabsorption	Celiac disease, cystic fibrosis, stool analysis	Steatorrhea assessment, gluten-free diet counseling	Cultural competence in dietary restrictions	SGT in college &Gastroenterology unit
4	Asthma	GINA guidelines, stepwise management, spacer use	Peak flow meter teaching, inhaler technique	Empowerment of patients for self-management	SGT in college &Asthma clinic, ER
5	Neonatal Jaundice	Kernicterus risk, phototherapy thresholds, Bhutani curve	Transcutaneous bilirubin measurement, exchange transfusion planning	Urgency in severe hyperbilirubinemia	SGT in college &NICU, Newborn nursery
5	Bleeding Tendency	Coagulation cascade, von Willebrand disease, ITP	Bleeding time tests, factor replacement administration	Compassion for chronic disease burden	SGT hall in college Hematology clinic, ER
6	DKA	Pathophysiology, anion gap, cerebral edema prevention	Insulin drip titration, ABG interpretation	Crisis management under pressure	SGT hall in college PICU, ER
6	FUO	Differential diagnoses (infections, malignancies)	Fever workup (cultures, imaging)	Systematic approach to complex cases	SGT in college &Infectious disease unit

Week	Seminar Topic	Knowledge	Skills	Attitudes	Practice Setting
7	Pediatric Emergencies & Poisoning	Toxidromes, antidotes (e.g., Naloxone), ABCDE stabilization	Airway management, decontamination procedures	Calmness in emergencies, leadership	SGT in college &ER, Toxicology center
7	HSP & JRA	Henoch-Schönlein purpura vs. juvenile arthritis, renal monitoring	Joint aspiration (simulation), skin biopsy recognition	Advocacy for early rehabilitation	SGT in college &Rheumatology ward
8	Leukemia	ALL vs. AML, CNS prophylaxis, BMA interpretation	Chemotherapy protocols, palliative care communication	Empathy for family distress	SGT in college &Oncology ward
8	Acute Flaccid Paralysis	Polio vs. Guillain-Barré, lumbar puncture analysis	Neurological exam (deep tendon reflexes, muscle grading)	Vigilance for outbreak reporting	SGT in college &Neurology clinic, ER
9	Genetic Diseases	Down syndrome, inborn errors of metabolism	Dysmorphology exam (simulated), genetic counseling	Non-judgmental counseling, ethical considerations	SGT in college &Genetics clinic

Methods of assessment

2. Assessments
- Formative: Simulations, role-playing during clinical training
- Summative: OSCEs, OSPE, Slide examination ,logbook

NO.	Type of examination		Mark
1	Final Comprehensive exam	Written exam(Mcqs in form of short cases)	40
2	Annual quest	Post clinical course exam, log book *& quizzes	20
3	Final clinical examination	OSCE &OSE clinical examination &slides	40
Total			100

Suggested Reading List:

1. Nelson Textbook of Pediatrics
2. Essentials of pediatrics.
3. Various internet related subjects.
4. Assigned Readings.