

**Ministry of Higher Education and Scientific Research  
Scientific Supervision and Scientific Evaluation Apparatus  
Directorate of Quality Assurance and Academic Accreditation  
Accreditation Department**



**Academic Program  
and Course  
Description Guide  
Year Two  
College of Medicine  
University of Alkafeel**

**2025-2026**

**University Name:** Alkafeel  
**Faculty/Institute:** College of Medicine  
**Year:** Two  
**Year Moderator:** Lect. Dr Hayder Talib Mohammed Ali  
**Academic or Professional Program Name:** Year Two/ M.B.Ch.B  
**Final Certificate Name:** MBChB  
**Academic System:** Courses  
**Description Preparation Date:** 2025-2026  
**File Completion Date:**

**Signature:**

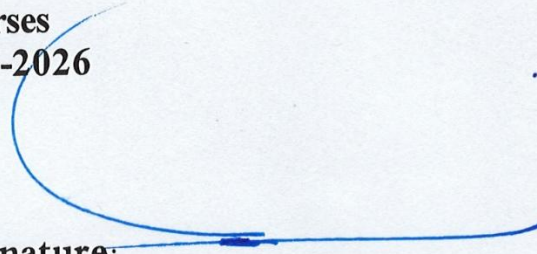


**Year Moderator:**

**Lect. Dr. Hayder Talib Mohammed Ali**

**Date: 10-9-2025**

**Signature:**



**Scientific Associate Name:**

**Asst. Prof. Dr. Fatimah Kareem**

**Khalaf**

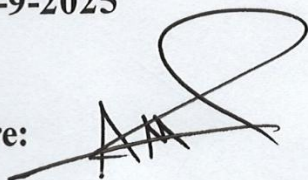
**Date: 10-9-2025**

**The file is checked by:**

**Department of Quality Assurance and University Performance**  
**Director of the Quality Assurance and University Performance Department:**  
**Asst. Lect. Ameer Mohammed Kadhim**

**Date: 10-9-2025**

**Signature:**



**Approval of the Dean**  
**Asst. Prof. Dr. Samer Makki Mohamed Al Hakkak**

## **Introduction:**

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills, so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in quarterly

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

## **Concepts and terminology:**

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**Academic Program Description:** The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

**Course Description:** Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

**Program Vision:** An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

**Program Mission:** Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

**Program Objectives:** They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

**Curriculum Structure:** All courses / subjects included in the academic program according to the approved learning system (Semesters) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

**Learning Outcomes:** A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

**Teaching and learning strategies:** They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

### **1. Program Vision**

World-class medical school recognized for excellence in education, research and clinical care, and to prepare the next generation of compassionate, innovative health care professional.

### **2. Program Mission**

Following the most updated and recognized parameters and fostering the scientific research to prepare qualified graduate in medicine to comply with the community needs and modernity in the profession.

### **3. Program Objectives**

1. Prepare graduates capable of diagnosis, treatment, and follow-up of patients.
2. Convey medical knowledge and skills through university education, continuous learning, and higher research work.
3. Fostering professional and moral values in providing health care.
4. joining the students in the process of complying and improving the knowledge through scientific research.

### **4. Program Accreditation**

Does the program have program accreditation? No (the first batch of the college are now a 4<sup>th</sup> year students)

### **5. Other external influences**

Is there a sponsor for the program?

Yes, Ministry of Higher Education- Private Education Department and Higher Education Authority- Attabah Abbasia

### **6. Program Structure**

| <b>Program Structure</b>        | <b>Number of Courses</b> | <b>Credit</b> | <b>Percentage</b> | <b>Reviews*</b> |
|---------------------------------|--------------------------|---------------|-------------------|-----------------|
| <b>Institution Requirements</b> | <b>2</b>                 | <b>41</b>     | <b>5%</b>         | <b>Basic</b>    |
| <b>College Requirements</b>     | <b>12</b>                | <b>41</b>     | <b>5%</b>         | <b>Basic</b>    |
| <b>Department Requirements</b>  | <b>2</b>                 | <b>41</b>     | <b>5%</b>         | <b>Basic</b>    |
| <b>Summer Training</b>          | <b>Nil</b>               | <b>Nil</b>    | <b>Nil</b>        |                 |
| <b>Other</b>                    |                          |               |                   |                 |

| <b>7. Program Description</b> |                    |                             |                     |                  |
|-------------------------------|--------------------|-----------------------------|---------------------|------------------|
| <b>Year/Level Course</b>      | <b>Course Code</b> | <b>Course Name</b>          | <b>Credit Hours</b> |                  |
|                               |                    |                             | <b>Theoretical</b>  | <b>Practical</b> |
| <b>Year Two</b>               | <b>PHY002</b>      | <b>Physiology S1</b>        | <b>4</b>            | <b>2</b>         |
|                               |                    | <b>Physiology S2</b>        | <b>4</b>            | <b>2</b>         |
|                               | <b>AN002</b>       | <b>Anatomy S1</b>           | <b>3</b>            | <b>4</b>         |
|                               |                    | <b>Anatomy S2</b>           | <b>3</b>            | <b>4</b>         |
|                               | <b>CH002</b>       | <b>Chemistry S1</b>         | <b>3</b>            | <b>2</b>         |
|                               |                    | <b>Chemistry S 2</b>        | <b>2</b>            | <b>2</b>         |
|                               | <b>EMB002</b>      | <b>Embryology</b>           | <b>2</b>            | <b>--</b>        |
|                               | <b>HIS002</b>      | <b>Histology S1</b>         | <b>2</b>            | <b>2</b>         |
|                               |                    | <b>Histology S 2</b>        | <b>2</b>            | <b>2</b>         |
|                               | <b>ECPD002</b>     | <b>ECPD</b>                 | <b>1</b>            | <b>4</b>         |
|                               | <b>EG002</b>       | <b>Educational Guidance</b> | <b>1</b>            | <b>--</b>        |
|                               | <b>CB002</b>       | <b>Crimes of</b>            | <b>2</b>            | <b>--</b>        |

|                                                    |                                                                                                                                                                                                                                                                           |             |  |  |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--|--|
|                                                    |                                                                                                                                                                                                                                                                           | Baath Party |  |  |
| 8. Expected learning outcomes of the program       |                                                                                                                                                                                                                                                                           |             |  |  |
| Knowledge                                          |                                                                                                                                                                                                                                                                           |             |  |  |
| Physiology                                         | Gain a comprehensive understanding of the structure and function of the human body at the cellular, tissue, organ, and system levels.                                                                                                                                     |             |  |  |
| Chemistry                                          | Explain the basic principles of clinical chemistry and its role in healthcare. Correlate alterations in carbohydrate, lipid, and protein metabolism with various disease states. Interpret common clinical chemistry tests used to assess renal, liver, and electrolytes. |             |  |  |
| Embryology                                         | Understanding the stages of human fetal development from the moment of fertilization to birth.                                                                                                                                                                            |             |  |  |
| Anatomy                                            | Understand the anatomical structure of skull, head and neck, cervical organs and the nervous system.                                                                                                                                                                      |             |  |  |
| Histology                                          | Understand the structure of the organ systems in human body, and the major histological features of different body organs                                                                                                                                                 |             |  |  |
| Skills                                             |                                                                                                                                                                                                                                                                           |             |  |  |
| Early Clinical and Professional Development (ECPD) | Develop the skills to gather a comprehensive medical history from patients and perform a thorough physical examination.                                                                                                                                                   |             |  |  |
| Ethics                                             |                                                                                                                                                                                                                                                                           |             |  |  |
| Medical Ethics                                     | To treat all patients according to principles of medical ethics, emphasizing patient confidentiality, informed consent, and professional integrity                                                                                                                        |             |  |  |
| Patient safety                                     | To develop essential clinical skills with the overall aim of ensuring patients’ safety.                                                                                                                                                                                   |             |  |  |

## **9. Teaching and Learning Strategies**

- 1. Theory lectures**
- 2. Laboratory sessions**
- 3. Display and presentation.**
- 4. Interactive discussion**
- 5. Brainstorming**
- 6. Small group teaching**
- 7. Flipped classroom.**
- 8. Seminar**
- 9. Clinical visit**
- 10. Interactive Learning Activities (ILA)**

## **10. Evaluation methods**

- 1. Homework and individual and group reports**
- 2. Daily quizzes (Formative and Summative Exams)**
- 3. Practical skills assessment**
- 4. Midterm and end of term exams**
- 5. Graduation projects**

## **11. Faculty**

### **Faculty Members**

| <b>Academic Rank</b> | <b>Specialization</b> | <b>Special Requirements/Skills (if applicable)</b> | <b>Number of the teaching staff</b> |
|----------------------|-----------------------|----------------------------------------------------|-------------------------------------|
|----------------------|-----------------------|----------------------------------------------------|-------------------------------------|

|                                            | General | Special |  | Staff | Lecturer |
|--------------------------------------------|---------|---------|--|-------|----------|
| <b>Asst.Prof. Dr. Samer Makki Mohammed</b> |         | ✓       |  | ✓     |          |
| <b>Asst.Prof. Dr. Fatima Kareem Khalaf</b> |         | ✓       |  | ✓     |          |
| <b>Prof. Dr. Ihasan M. Ajeena</b>          |         | ✓       |  |       | ✓        |
| <b>Prof. Dr. Talib Hussain Kamoona</b>     |         | ✓       |  | ✓     |          |
| <b>Lect. Dr. Haider Abdulwahab</b>         |         | ✓       |  | ✓     |          |
| <b>Lect. Dr. Ali Kamal</b>                 |         | ✓       |  | ✓     |          |
| <b>Lect. Dr. Abdulzahra A. Hussain</b>     |         | ✓       |  | ✓     |          |
| <b>Lect. Dr Firas Fadhil Mohamed</b>       |         | ✓       |  | ✓     |          |
| <b>Lect. Dr. Ghufra Bayan</b>              |         | ✓       |  | ✓     |          |
| <b>Asst.Prof. Dr. Amaar Saeed Rasheed</b>  |         | ✓       |  |       | ✓        |
| <b>Asst.Prof. Dr. Ahmed Nasser kaftan</b>  |         | ✓       |  |       | ✓        |
| <b>Asst.Prof. Dr. Rasha H. Dosh</b>        |         | ✓       |  |       | ✓        |
| <b>Asst.Prof. Dr. Munqith Mazin</b>        |         | ✓       |  |       | ✓        |
| <b>Asst.Lect. Asya Abbas Abood</b>         |         | ✓       |  | ✓     |          |
| <b>Asst.Lect. Ameer Mohammed Kadhim</b>    |         | ✓       |  | ✓     |          |
| <b>Asst.Lect Huda Falah Judi</b>           |         | ✓       |  | ✓     |          |
| <b>Muhammed Taqi Jawad</b>                 | ✓       |         |  | ✓     |          |
| <b>Hussain Ali Abdulwahed</b>              | ✓       |         |  | ✓     |          |
| <b>Yassin Faris Abd Yassin</b>             | ✓       |         |  | ✓     |          |
| <b>Ali Munthir Nazar</b>                   | ✓       |         |  | ✓     |          |
| <b>Mujtaba Hassan Rajab</b>                | ✓       |         |  | ✓     |          |

|                                |   |  |  |   |  |
|--------------------------------|---|--|--|---|--|
| <b>Fatima Abdulzahraa</b>      | ✓ |  |  | ✓ |  |
| <b>Noor Mohammed Kadhim</b>    | ✓ |  |  | ✓ |  |
| <b>Fatima Mohammed Hussain</b> | ✓ |  |  | ✓ |  |
| <b>Hassan Abdulhaleem</b>      | ✓ |  |  | ✓ |  |
| <b>Mustafa Adnan Essa</b>      | ✓ |  |  | ✓ |  |

## 12. Professional Development

### Mentoring new faculty members

Subjecting new teachers to courses on teaching methods and taking a teaching competency test, and only by passing it are they allowed to teach, while following up on their teaching methods and giving them feedback.

### Professional development of faculty members

Follow up on teaching methods for all teachers by the Office of the Assistance Dean for Scientific Affairs, prepare seminars and workshops to develop teaching and speaking skills, and ensure the preparation and presentation of lectures in the continuing medical education curriculum.

## 13. Acceptance Criterion

The academic average for the student's graduation from preparatory school, physical and mental health according to the standards established and approved by the Ministry of Higher Education and Scientific Research

## 14. The most important sources of information about the program

1. Approved and authenticated documents for the general curriculum of the college and the courses, vision, mission, and goals of the university and college in both Arabic and English.
2. The website of the Ministry of Higher Education and Scientific Research.
3. The official website of AlKafeel University and its College of Medicine.

### 1. Program Development Plan

Systematic and recurring self-evaluation studies of the program based on evaluating the learning and teaching outcomes of students and obtaining feedback

from students about the program's components.

2) Regular meetings with teaching staff in local and foreign medical colleges to learn about new curricula and teaching methods.

3) Holding workshops on developing curricula and teaching methods in the college or attending those held in neighboring universities.

| Program Skills Outline |                |                                 |                              |                                    |        |        |        |        |        |        |        |        |        |        |        |
|------------------------|----------------|---------------------------------|------------------------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                        |                |                                 |                              | Required program Learning outcomes |        |        |        |        |        |        |        |        |        |        |        |
| Year/<br>Level         | Course<br>Code | Course<br>Name                  | Basic<br>or<br>optio-<br>nal | Knowledge                          |        |        |        | Skills |        |        |        | Ethics |        |        |        |
|                        |                |                                 |                              | A<br>1                             | A<br>2 | A<br>3 | A<br>4 | B<br>1 | B<br>2 | B<br>3 | B<br>4 | C<br>1 | C<br>2 | C<br>3 | C<br>4 |
| Year<br>Two            | EMB00<br>2     | Embry<br>ology                  | Basic                        |                                    |        | /      |        |        |        |        |        |        |        | /      |        |
|                        | AN002          | Anato<br>my                     | Basic                        |                                    |        | /      |        |        |        | /      |        |        |        | /      |        |
|                        | CH002          | Chemis<br>try                   | Basic                        |                                    |        | /      |        |        | /      |        |        |        |        | /      |        |
|                        | PH002          | Physiol<br>ogy                  | Basic                        |                                    |        | /      |        |        |        | /      |        |        |        |        | /      |
|                        | HIS002         | Histolo<br>gy                   | Basic                        |                                    |        | /      |        |        |        | /      |        |        |        | /      |        |
|                        | ECPD2          | ECPD2                           | Basic                        |                                    |        | /      |        |        |        |        | /      |        |        |        | /      |
|                        | •EDU0<br>02    | Educati<br>onal<br>guidanc<br>e | Basic                        |                                    |        |        |        |        |        |        |        |        |        |        | /      |
|                        | DEM00<br>2     | Democr<br>acy                   | Basic                        |                                    |        |        | /      |        |        |        |        |        |        |        | /      |
|                        | CB002          | Crimes<br>of<br>Baath           | Basic                        |                                    |        |        | /      |        |        |        | /      |        |        |        | /      |

## Course Description Form

|                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Course name</b>                                                                                                                                                                                                                                                                                                                            |
| <b>Anatomy</b>                                                                                                                                                                                                                                                                                                                                   |
| <b>2. code name:</b>                                                                                                                                                                                                                                                                                                                             |
| <b>AN002</b>                                                                                                                                                                                                                                                                                                                                     |
| <b>3. Semester/ Year :</b>                                                                                                                                                                                                                                                                                                                       |
| <b>First and Second semester/ 2025-2026</b>                                                                                                                                                                                                                                                                                                      |
| <b>1. This description was prepared in</b>                                                                                                                                                                                                                                                                                                       |
| <b>10-9-2025</b>                                                                                                                                                                                                                                                                                                                                 |
| <b>2. Available attendance forms</b>                                                                                                                                                                                                                                                                                                             |
| <b>Lectures and practical labs</b>                                                                                                                                                                                                                                                                                                               |
| <b>3. Number of study hours (total) / Number of units (total)</b>                                                                                                                                                                                                                                                                                |
| <b>120 hours/6 credits</b>                                                                                                                                                                                                                                                                                                                       |
| <b>4. Course instructor name</b>                                                                                                                                                                                                                                                                                                                 |
| <b>Asst. Prof. Dr. Munqith Mazin Almahmood</b><br><b>Email: <a href="mailto:Munqithm.almahmood@uokufa.edu.iq">Munqithm.almahmood@uokufa.edu.iq</a></b><br><b>Muhammed Taqi Jawad</b><br><b>Hussain Ali Abdulwahed</b><br><b>Noor Mohammed Kadhim</b><br><b>Fatima Mohammed Hussain</b><br><b>Hassan Abdulhaleem</b><br><b>Mustafa Adnan Essa</b> |
| <b>5. Course objectives</b>                                                                                                                                                                                                                                                                                                                      |
| <ul style="list-style-type: none"><li>• Illustrate the anatomical structure of skull, regions of the head and neck, and cervical organs.</li><li>• Demonstrate the anatomical components of the nervous system, and</li></ul>                                                                                                                    |

define the intricate structure and function of each part.

## 6. Teaching and learning strategies

Strategy

Theoretical lectures and Lab sessions

## 7. Course structure

| Evaluation method                             | Learning method | Name of unit or topic              | Required learning outcomes | hours | week |
|-----------------------------------------------|-----------------|------------------------------------|----------------------------|-------|------|
| Daily quizzes (Formative and Summative Exams) | Lecture         | Skull anatomy                      |                            |       | 1    |
|                                               | =               | Face and scalp                     |                            |       | 2    |
|                                               | =               | Temporal region                    |                            |       | 3    |
|                                               | =               | infratemporal Fossa and TMJ        |                            |       | 4    |
| Reports                                       | =               | Orbit and eye                      |                            |       | 5    |
|                                               | =               | Nose and paranasal sinuses         |                            |       | 6    |
| Midterm Exams                                 | =               | Oral Cavity and Salivary Glands    |                            |       | 7    |
|                                               | =               | Ear anatomy                        |                            |       | 8    |
| Final Exam                                    | =               | Fascial Compartments of the Neck   |                            |       | 9    |
|                                               | =               | Triangles and Muscles of the Neck  |                            |       | 10   |
| Theoretical Final Exam                        | =               | Thyroid Gland, Trachea and Pharynx |                            |       | 11   |

|  |   |                                                                       |  |  |           |
|--|---|-----------------------------------------------------------------------|--|--|-----------|
|  | = | <b>Larynx and<br/>Innervation of the<br/>Neck</b>                     |  |  | <b>12</b> |
|  | = | <b>Blood Vessels and<br/>Lymphatics of the Neck</b>                   |  |  | <b>13</b> |
|  | = | <b>Root of the neck</b>                                               |  |  | <b>14</b> |
|  | = | <b>Cranial Cavity and<br/>Gross<br/>Anatomy of Nervous<br/>system</b> |  |  | <b>15</b> |
|  | = | <b>Meninges and Dural<br/>Venous<br/>Sinuses</b>                      |  |  | <b>16</b> |
|  | = | <b>Cerebral Cortex and<br/>Functional Localization</b>                |  |  | <b>17</b> |
|  | = | <b>Cerebral medullary<br/>center<br/>(white mater)</b>                |  |  | <b>18</b> |
|  | = | <b>Brain Ventricles and<br/>CSF</b>                                   |  |  | <b>19</b> |
|  | = | <b>Diencephalon</b>                                                   |  |  | <b>20</b> |
|  | = | <b>Brain stem</b>                                                     |  |  | <b>21</b> |
|  | = | <b>Cerebellum</b>                                                     |  |  | <b>22</b> |
|  | = | <b>Limbic System and<br/>Reticular<br/>Formation</b>                  |  |  | <b>23</b> |
|  | = | <b>Spinal cord</b>                                                    |  |  | <b>24</b> |
|  | = | <b>Sensory and motor</b>                                              |  |  | <b>25</b> |

|  |   |                                                              |  |  |           |
|--|---|--------------------------------------------------------------|--|--|-----------|
|  |   | pathway                                                      |  |  |           |
|  | = | <b>Cross Sectional Anatomy and Blood Supply of the Brain</b> |  |  | <b>26</b> |
|  |   |                                                              |  |  | <b>27</b> |
|  |   |                                                              |  |  | <b>28</b> |
|  |   |                                                              |  |  | <b>29</b> |

## 8. Course Evaluation

**For each semester: Evaluation semester 100%**

**10 % Grades quizzes exam,**

**20 % Grades theoretical mid-semester,**

**70% Grades final semester (Final practical 20 grades+ and Final theoretical 50 grades)**

## 1. Learning and teaching resources

|                                                                                      |                                                                                                                                                  |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4. Required textbooks (methodology if any)</b>                                    | <b>1. 1. Clinical Anatomy by Regions (Snell)</b><br><b>2. 2. Clinically Oriented Anatomy (Moore)</b><br><b>3. 3. Gray's Anatomy for Students</b> |
| <b>Main References (Sources)</b>                                                     | <b>Same as above</b>                                                                                                                             |
| <b>Recommended supporting books and references (scientific journals, reports...)</b> |                                                                                                                                                  |
| <b>Electronic references , websites</b>                                              | <b>[1] TeachMeAnatomy - Making Anatomy Simple</b>                                                                                                |

|  |                                                                                                                                                                                        |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>[2] Home   Anatomy.app   Learn anatomy   3D models, articles, and quizzes</b></p> <p><b>[3] Human Anatomy Explorer   Detailed 3D anatomical illustrations(innerbody.com)</b></p> |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Course Description form:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Course name</b>                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Embryology</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>2. Course code:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>EMB002</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>3. Semester/ Year :</b>                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>First / The second stage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>4. Description Preparation Date</b>                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>September 9 2025</b>                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>5. Available attendance forms</b>                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Lectures</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>6. Number of study hours (total) / Number of units (total)</b>                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Thirty hours /2 credits</b>                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>7. Course instructor name</b>                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Lect. Dr. Firas Fadhil Mohammed Al-Masoodi</b><br><b>Firas.almasoody@alkafeel.edu.iq</b>                                                                                                                                                                                                                                                                                                                                                                        |
| <b>8. Course objectives</b>                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"><li>• <b>Understanding the stages of human embryo development from fertilization to birth.</b></li><li>• <b>Understand how the body's organs are formed, including internal and external organs.</b></li><li>• <b>Understand how birth defects occur, their causes, and how to diagnose and treat them.</b></li><li>• <b>Linking embryology to clinical medicine, and its applications in diagnosis and treatment.</b></li></ul> |
| <b>9. Teaching and learning strategies</b>                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                 |                                                                                                                                                                                                                        |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategy</b> | <b>Embryology is an important subject for medical students, because it provides them with the basic knowledge they need to understand how the human body grows and develops, and how diseases and disorders occur.</b> |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 10.Course structure

| <b>Evaluation method</b>                                 | <b>Learning method</b> | <b>Name of unit or topic</b>                           | <b>Required learning outcomes</b> | <b>hours</b> | <b>week</b> |
|----------------------------------------------------------|------------------------|--------------------------------------------------------|-----------------------------------|--------------|-------------|
| <b>Daily quizzes<br/>(Formative and Summative Exams)</b> | <b>Lecture</b>         | <b>Introduction to Medical Embryology.</b>             |                                   | <b>1</b>     | <b>1</b>    |
|                                                          | <b>=</b>               |                                                        |                                   | <b>1</b>     | <b>2</b>    |
|                                                          | <b>=</b>               | <b>Gametogenesis-Oogenesis and Spermatogenesis.</b>    |                                   | <b>1</b>     | <b>3</b>    |
|                                                          | <b>=</b>               | <b>First Week of Development.</b>                      |                                   | <b>1</b>     | <b>4</b>    |
|                                                          | <b>=</b>               | <b>Ovulation to Implantation.</b>                      |                                   | <b>1</b>     | <b>5</b>    |
|                                                          | <b>=</b>               | <b>Second Week of Development-Bilaminar Germ Disc.</b> |                                   | <b>1</b>     | <b>5</b>    |
|                                                          | <b>=</b>               | <b>Third Week of Development-Trilaminar Germ Disc.</b> |                                   | <b>1</b>     | <b>6</b>    |
|                                                          | <b>=</b>               | <b>Third -Eighth Week of Development</b>               |                                   |              |             |
|                                                          | <b>=</b>               | <b>The Embryonic Period.</b>                           |                                   | <b>1</b>     | <b>7</b>    |
|                                                          | <b>=</b>               | <b>9<sup>th</sup> week to Birth-The Fetal Period.</b>  |                                   |              |             |
| <b>Midterm Exams</b>                                     | <b>=</b>               | <b>Development of the Gut Tube and Body Cavities.</b>  |                                   | <b>1</b>     | <b>8</b>    |
| <b>Theoretical Final Exams</b>                           | <b>=</b>               | <b>Development of the Placenta and Fetal</b>           |                                   | <b>1</b>     | <b>9</b>    |

|  |   |                                                                                        |  |          |           |
|--|---|----------------------------------------------------------------------------------------|--|----------|-----------|
|  | = | <b>membranes.</b>                                                                      |  |          |           |
|  | = | <b>Development of the Respiratory System- Formation of Lung Buds.</b>                  |  | <b>1</b> | <b>10</b> |
|  | = | <b>Development of the Cardiovascular System-Part I</b>                                 |  | <b>1</b> | <b>11</b> |
|  | = | <b>Development of the Cardiovascular System-Part II</b>                                |  | <b>1</b> | <b>12</b> |
|  | = | <b>Development of the Digestive System- Part I</b>                                     |  | <b>1</b> | <b>13</b> |
|  | = | <b>Development of the Digestive System- Part I</b>                                     |  |          |           |
|  | = | <b>Development of the Urinary System</b>                                               |  | <b>1</b> | <b>14</b> |
|  | = | <b>Development of the Genital System</b>                                               |  |          |           |
|  | = | <b>Clinical Aspects of Urogenital System.</b>                                          |  | <b>1</b> | <b>15</b> |
|  | = | <b>Development of the Head and Neck.</b>                                               |  | <b>1</b> | <b>16</b> |
|  | = | <b>Derivatives of the Pharyngeal Arches, Pharyngeal Pouches, and Pharyngeal Clefts</b> |  | <b>1</b> | <b>17</b> |
|  | = | <b>Development of the Skeletal System.</b>                                             |  | <b>1</b> | <b>18</b> |
|  | = | <b>Birth Defects</b>                                                                   |  | <b>1</b> | <b>19</b> |
|  |   | <b>Prenatal Diagnosis</b>                                                              |  |          |           |

|  |   |                                                                       |  |          |           |
|--|---|-----------------------------------------------------------------------|--|----------|-----------|
|  | = | <b>Development of the Integumentary System.</b>                       |  | <b>1</b> | <b>20</b> |
|  | = | <b>Development of the Ear.</b>                                        |  |          |           |
|  | = | <b>Development of the Eye.</b>                                        |  | <b>1</b> | <b>21</b> |
|  | = | <b>Development of the Nervous System.</b>                             |  | <b>1</b> | <b>22</b> |
|  | = | <b>Development of the Brain (Hindbrain, Midbrain, and Forebrain).</b> |  | <b>1</b> | <b>23</b> |
|  | = | <b>of Spinal Cord and</b>                                             |  | <b>1</b> | <b>24</b> |
|  | = | <b>Peripheral nervous system.</b>                                     |  | <b>1</b> | <b>25</b> |
|  | = |                                                                       |  | <b>1</b> | <b>26</b> |
|  | = |                                                                       |  | <b>1</b> | <b>27</b> |
|  | = |                                                                       |  | <b>1</b> | <b>28</b> |
|  | = |                                                                       |  | <b>1</b> | <b>29</b> |
|  | = |                                                                       |  | <b>1</b> | <b>30</b> |

### 11.Course Evaluation

**For each semester: Evaluation semester 100%**

**10 % Grades quizzes exam,**

**20 % Grades theoretical mid-semester,**

**70% Grades final semester (Final practical 20 grades+ and Final theoretical**

50 grades)

## 12.Learning and teaching resources

|                                                                                              |                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Required textbooks (methodology if any)</b>                                               | <b>Langman's Medical Embryology<br/>W Sadler &amp; Jan Langman-13th<br/>edition.</b><br><br><b>Larsen's Human Embryology 6th<br/>Edition.</b><br><br><b>Before we are born. Essentials of<br/>embryology and birth defects- 9th<br/>edition.</b> |
| <b>Main References (Sources)</b>                                                             | <b>Same as above</b>                                                                                                                                                                                                                             |
| <b>Recommended supporting books<br/>and references (scientific journals,<br/>reports...)</b> | <b>Additional resources are provided<br/>in each lecture separately if<br/>required</b>                                                                                                                                                          |
| <b>Electronic references ,websites</b>                                                       | <b>Additional resources are provided<br/>in each lecture separately if<br/>required</b>                                                                                                                                                          |

### Course Description form:

1. Course name:

Histology

2. Course code :

**HIS002**

**3. Semester/ Year :**

**First + Second / 2025-2026**

**4. Description Preparation Date**

**September 9 2025**

**5. Available attendance forms:**

**Lectures + Lab**

**6. Number of study hours (total) / Number of units) total:(**

**120hours (60T, 60P) / 6 credits**

**7. Course instructor name**

**Asst. Prof. Dr. Rasha Hatem Saeed      Rasha.dosh@uokufa.edu.iq**

**Asst. Lect. Asiya Abbas Abood**

**8. Course objectives**

**The course is designed to enable the students to:**

1. Identify the structure of the organ systems in human body
2. Define major histological features of different body organs.
3. Identify regional variations in histological structures in different organ systems.
4. Relate histology to selected pathological conditions of different body organs.
5. Identify tissue section in histological slides stained by common and specific stains

**9. Teaching and learning strategies**

**Strategy**

The student acquires knowledge and skills in the subject of human histology so that he/she is able to recognize the microstructure of the normal primary tissues and body organs.

**10.Course structure**

| week | hours                                      | Required learning outcomes                                                                                                                      | Name of unit or topic                | Learning method | Evaluation method                                                                                                           |
|------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 1    | 2<br>Theoretical<br>+<br>2<br>Laboratories | The structure & function of cellular organelles. Cytoskeleton. The major 4 basic human tissues. Cell Adhesion & Cell Adhesion Molecules (CAMs). | Introduction to Histology .          | Lecture and lab | Daily quizzes (Formative and Summative Exams)<br><br>Reports<br><br>Practical exams<br><br>Midterm Exams<br><br>Final Exams |
| 2    |                                            | Epithelial tissue and Glandular epithelia.                                                                                                      | Specializations of the cell surface. |                 |                                                                                                                             |
| 3    |                                            | Ground substance, fibers and cells of connective tissue. Major classifications of connective tissue with their sub-classification.              | Connective tissue                    |                 |                                                                                                                             |
| 4    |                                            | Hyaline, elastic & fibrocartilage.<br><br>Growth of cartilage.<br><br>Bone: the histological and functional features of                         | Cartilage                            |                 |                                                                                                                             |

|   |  |                                                                                                                                                                                                                                     |                       |  |  |
|---|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--|--|
|   |  | <p><b>bone cells, matrix. Types of bones.</b></p> <p><b>Types of ossifications, growth &amp; remodeling.</b></p>                                                                                                                    |                       |  |  |
| 5 |  | <p><b>Structure, function, localization and contraction &amp; of skeletal muscle. Duchenne muscular dystrophy, myasthenia gravis.</b></p> <p><b>Structure, function and localization of cardiac muscle &amp; smooth muscle.</b></p> | <b>Muscle tissue</b>  |  |  |
| 6 |  | <p><b>Anatomical &amp; functional divisions of the nervous system. Cells &amp; synapses.</b></p> <p><b>Structure and function of the neuromuscular junction. Autonomic and sensory ganglia.</b></p> <p><b>Nerve fibers,</b></p>     | <b>Nervous system</b> |  |  |

|   |  |                                                                                                                                                                                                                                                                                                               |                    |  |  |
|---|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--|--|
|   |  | <p>nerves, and neuroglia.<br/>Guillain-Barre syndrome and multiple sclerosis.<br/>Structure and function of blood-nerve barrier, choroid plexus.<br/>White and grey matter in the brain and spinal cord.<br/>The structure and function of the meninges.<br/>Blood-brain barrier &amp; blood-CSF barrier.</p> |                    |  |  |
| 7 |  | <p>Respiratory system I (conducting portion): nose, nasal cavities, olfactory mucosa, nasopharynx, larynx, vestibular and vocal folds, epiglottis, trachea, bronchi, bronchioles, and terminal bronchioles.</p>                                                                                               | Respiratory system |  |  |
| 8 |  | Midterm                                                                                                                                                                                                                                                                                                       |                    |  |  |

|           |                                                                       |                                                                                                                                                                                                                                                                                                                        |                              |  |  |
|-----------|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--|--|
|           |                                                                       | <b>examination</b>                                                                                                                                                                                                                                                                                                     |                              |  |  |
| <b>9</b>  |                                                                       | <b>Midterm examination</b>                                                                                                                                                                                                                                                                                             |                              |  |  |
| <b>10</b> | <b>2</b><br><b>Theoretical</b><br><br><b>2</b><br><b>Laboratories</b> | <b>Respiratory system II (respiratory portion): respiratory bronchioles, alveolar ducts, and alveoli. Structure &amp; function of the blood-air barrier.</b>                                                                                                                                                           | <b>Respiratory system</b>    |  |  |
| <b>11</b> |                                                                       | <b>The structure of the heart wall.</b><br><br><b>Heart chambers. Purkinje fibers.</b><br><br><b>Histological structure of blood vessels, large elastic arteries, medium arteries, and arterioles.</b><br><br><b>Capillaries (continuous, fenestrated and sinusoids). Capillary plexus.</b><br><br><b>Veins; large</b> | <b>Cardiovascular system</b> |  |  |

|    |  |                                                                                                                                                                                                                                                                                                                               |                                        |  |  |
|----|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--|--|
|    |  | <p><b>veins (vena cava), small to medium veins, and venules.</b></p> <p><b>Arteriovenous anastomosis.</b></p>                                                                                                                                                                                                                 |                                        |  |  |
| 12 |  | <p><b>Blood cells, formed elements.</b></p> <p><b>Hematopoiesis; stem cells, hematopoietic stem cells, myeloid and lymphoid lineages. The structure of the bone marrow. Maturation of granulocytes, maturation of lymphocytes &amp; monocytes. Erythropoiesis. Thrombopoiesis.</b></p> <p><b>Theoretical Examination.</b></p> | <p><b>Hematopoiesis and blood.</b></p> |  |  |
| 13 |  | <p><b>Primary and secondary lymphoid organs. Lymph vessels. Lymphatic cells. The structure and function of the thymus, lymph</b></p>                                                                                                                                                                                          | <p><b>Lymphatic system.</b></p>        |  |  |

|           |  |                                                                                                                                                                                                                                                                                                        |                             |  |  |
|-----------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--|--|
|           |  | <b>node.</b>                                                                                                                                                                                                                                                                                           |                             |  |  |
| <b>14</b> |  | <b>Lymphatic system. The structure and function of the spleen, tonsil and peyer's patches.</b>                                                                                                                                                                                                         | <b>Lymphatic system.</b>    |  |  |
| <b>15</b> |  | <b>Final examination</b>                                                                                                                                                                                                                                                                               | <b>Final examination</b>    |  |  |
| <b>16</b> |  | <b>The histology of the kidney, nephron, ureter, urinary bladder and urethra.</b>                                                                                                                                                                                                                      | <b>Urinary system</b>       |  |  |
| <b>17</b> |  | <b>Differentiate between thick and thin skin. Epidermal skin appendages. The structure and function of hair follicles. The structure, function, and localization of sebaceous glands, eccrine and apocrine sweat glands. Pemphigus, Basal cell carcinoma, Psoriasis, Malignant melanoma, Vitiligo,</b> | <b>Integumentary system</b> |  |  |

|    |  |                                                                                                                                                   |                                       |  |  |
|----|--|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--|--|
|    |  | <p><b>Albinism, bullous pemphigoid, alopecia totalis and areata, and acne</b></p> <p><b>The Sensory Receptors of the skin.</b></p>                |                                       |  |  |
| 18 |  | <p><b>The basic histological characteristics of all endocrine glands. The glandular and nervous tissue components of the pituitary gland.</b></p> | <p><b>Endocrine system Part 1</b></p> |  |  |
| 19 |  | <p><b>The microscopic structures of anterior and posterior pituitary.</b></p>                                                                     | <p><b>Endocrine system Part 1</b></p> |  |  |
| 20 |  | <p><b>The structure and function of the thyroid gland, parathyroid gland, adrenal gland, and pineal gland.</b></p>                                | <p><b>Endocrine system Part 2</b></p> |  |  |
| 21 |  | <p><b>Histology of oral cavity, lip, tongue papilla, pharynx, esophagus, stomach, small</b></p>                                                   | <p><b>Introduction to GIT.</b></p>    |  |  |

|    |                                 |                                                                                                                                 |                            |  |  |
|----|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------|--|--|
|    |                                 | intestine, large intestine, anus.                                                                                               |                            |  |  |
| 22 |                                 | Histology of liver lobules and triad, pancreas and gall bladder.                                                                | GIT                        |  |  |
| 23 |                                 | Midterm examination                                                                                                             | Midterm examination        |  |  |
| 24 |                                 | Midterm examination                                                                                                             | Midterm examination        |  |  |
| 25 |                                 | Tests and seminephrous tubules, male sperm passages, seminal vesicle, prostate, and urethra.                                    | Male reproductive system   |  |  |
| 26 | 2 Theoretical<br>2 Laboratories | Ovaries, types of follicles, corpus luteum, uterine tubes, uterus and endometrial cycles, cervix and vagina and mammary glands. | Female reproductive system |  |  |
| 27 |                                 | Histological structure of the eye ball, eyelids, and                                                                            | Organ of special senses    |  |  |

|           |  |                                                     |                                    |  |  |
|-----------|--|-----------------------------------------------------|------------------------------------|--|--|
|           |  | <b>neural retina.</b>                               | <b>eye</b>                         |  |  |
| <b>28</b> |  | <b>Histology of external, middle and inner ear.</b> | <b>Organ of special senses ear</b> |  |  |
| <b>29</b> |  | <b>Overview</b>                                     |                                    |  |  |
| <b>30</b> |  | <b>Final examination</b>                            |                                    |  |  |

### 11.Course Evaluation

For each semester: Evaluation semester 100%

10 % Grades quizzes exam,

20 % Grades theoretical mid-semester,

70% Grades final semester (Final practical 20 grades+ and Final theoretical 50 grades)

### 12.Learning and teaching resources

|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Required textbooks (methodology if any)</b> | <p><b>[1] Histology: A Text and Atlas: With Correlated Cell and Molecular Biology, 8th edition, by Wojciech Pawlina, Michael H. Ross.</b></p> <p><b>[2] Junqueira's Basic Histology: Text and Atlas, 16th Edition, by Anthony L. Mescher.</b></p> <p><b>[3] Netter's Essential Histology: With Correlated Histopathology (Netter Basic Science) 3rd Edition, by William K. Ovalle , Patrick C. Nahirney.</b></p> |
| <b>Main References (Sources)</b>               |                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Recommended supporting</b>                  | <b>[1] Lippincott's Illustrated Reviews: Cell and Molecular Biology, 2nd edition, by Nalini Chandar and Susan Viselli.</b>                                                                                                                                                                                                                                                                                       |

|                                                                   |                                                                                                                                                                                                      |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>books and references<br/>(scientific journals, reports...)</b> | <p>[2] Stevens &amp; Lowe's Human Histology 5th Edition, by James S. Lowe, Peter G. Anderson.</p> <p>[3] Leeson TS, Leeson CR &amp; Paparo AA (1988): Text/Atlas of Histology. WB Saunders. USA.</p> |
| <b>Electronic references , websites</b>                           | <p><a href="https://libguides.tulane.edu/histo_ed">https://libguides.tulane.edu/histo_ed</a></p>                                                                                                     |

### Course Description Form:

|                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Course name:</b>                                                                                                                         |
| ECPD 2                                                                                                                                         |
| <b>2. Course code:</b>                                                                                                                         |
| ECPD002                                                                                                                                        |
| <b>3. Semester/ Year :</b>                                                                                                                     |
| Annual program/ 2025-2026                                                                                                                      |
| <b>4. Description Preparation Date</b>                                                                                                         |
| September 9 2025                                                                                                                               |
| <b>5. Available attendance forms:</b>                                                                                                          |
| Class + Skill Lab+ Hospital visits                                                                                                             |
| <b>6. Number of study hours (total) / Number of units) total:(</b>                                                                             |
| 30 Theory lectures+ 60 Practical sessions = 3 Credits                                                                                          |
| <b>7. Course instructor name</b>                                                                                                               |
| Lect. Dr. Haider Abdul-Wahab Alhakim<br>haidar.alhakim@alkafeel.edu.iq<br>Yassin Faris Abd Yassin<br>Ali Munthir Nazar<br>Mujtaba Hassan Rajab |
| <b>8. Course objectives</b>                                                                                                                    |

Early start, creates, develops, and improve the skills of medical college students from a clinical standpoint, as well as from a professional and personal standpoint, so that they become highly competent and able to perform the practical tasks they will face when they begin their work after graduating from college in the service of their patients and their community.

## 9. Teaching and learning strategies

|                 |                                                                                                                                                                                                                                                                        |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategy</b> | <b>1) Theory lectures as LGT to cover the knowledge of the clinical aspect of medical management (diagnosis) and professionalism and medical ethics.</b><br><b>2) Training at the clinical skills lab.</b><br><b>3) Field visits to the hospitals and PHC clinics.</b> |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 10.Course structure

| <b>week</b> | <b>hours</b> | <b>Required learning outcomes</b> | <b>Name of unit or topic</b>                                       | <b>Learning method</b> | <b>Evaluation method</b>                             |
|-------------|--------------|-----------------------------------|--------------------------------------------------------------------|------------------------|------------------------------------------------------|
| 1           |              |                                   | <b>ECPD Introduction &amp; Plans</b>                               |                        |                                                      |
| 2           |              |                                   | <b>Basic Principles of History Taking</b>                          |                        |                                                      |
| 3           |              |                                   | <b>Basic Principles of General Examination</b>                     |                        |                                                      |
| 4           |              |                                   | <b>Vital Signs Assessment</b>                                      | <b>LGT</b>             |                                                      |
| 5           |              |                                   | <b>Communication Skills</b>                                        | <b>SGT</b>             |                                                      |
| 6           |              |                                   | <b>Professionalism in the Medical Context (Medical Leadership)</b> | <b>ILA session</b>     | <b>Daily quizzes (Formative and Summative Exams)</b> |
| 7           |              |                                   | <b>Professionalism in the Medical Context (Time Management)</b>    |                        |                                                      |
| 8           |              |                                   | <b>Medical Recording and</b>                                       |                        |                                                      |
| 9           |              |                                   |                                                                    |                        |                                                      |
| 10          |              |                                   |                                                                    |                        |                                                      |
| 11          |              |                                   |                                                                    |                        | <b>Mid-year Exams</b>                                |
| 12          |              |                                   |                                                                    |                        |                                                      |

|    |  |  |                                  |  |                        |
|----|--|--|----------------------------------|--|------------------------|
| 13 |  |  | <b>Confidentiality</b>           |  | <b>OSCE<br/>exams</b>  |
| 14 |  |  | <b>Basic Life Support (BLS)</b>  |  |                        |
| 15 |  |  | <b>(Overview).</b>               |  |                        |
| 16 |  |  | <b>Basic Principles of</b>       |  | <b>Final<br/>Exams</b> |
| 17 |  |  | <b>Investigations</b>            |  |                        |
| 18 |  |  | <b>Inter-professional</b>        |  |                        |
| 19 |  |  | <b>Collaboration in</b>          |  |                        |
| 20 |  |  | <b>Healthcare</b>                |  |                        |
| 21 |  |  | <b>Common Emergencies</b>        |  |                        |
| 22 |  |  | <b>Evidence-Based Medicine</b>   |  |                        |
| 23 |  |  | <b>(Basic Concept)</b>           |  |                        |
| 24 |  |  | <b>Epidemiology and Public</b>   |  |                        |
| 25 |  |  | <b>Health (Infection Control</b> |  |                        |
| 26 |  |  | <b>and Prevention)</b>           |  |                        |
| 27 |  |  | <b>OSCE Preparation</b>          |  |                        |
| 28 |  |  | <b>Medical Negligence and</b>    |  |                        |
| 29 |  |  | <b>Malpractice</b>               |  |                        |
| 30 |  |  | <b>Human Rights and</b>          |  |                        |
|    |  |  | <b>Medical Practice</b>          |  |                        |
|    |  |  | <b>Role of AI in Modern</b>      |  |                        |
|    |  |  | <b>Medical Practice</b>          |  |                        |
|    |  |  | <b>Concept Map (Role in</b>      |  |                        |
|    |  |  | <b>Medical Teaching)</b>         |  |                        |
|    |  |  | <b>Principles of Community</b>   |  |                        |
|    |  |  | <b>Follow up</b>                 |  |                        |
|    |  |  | <b>Principles of Reflection</b>  |  |                        |
|    |  |  | <b>and</b>                       |  |                        |
|    |  |  | <b>Feedback in the Medical</b>   |  |                        |

|  |  |  |                                                                                                                                                                                                                                                                                                  |  |  |
|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|  |  |  | <b>Practice</b><br><b>Medical Career Management</b><br><b>Basic Considerations in Prescribing Medications.</b><br><b>Practical Sessions</b><br><b>History taking</b><br><b>General examination</b><br><b>Vital signs</b><br><b>Investigations (Glucometer/swabs)</b><br><b>Basic procedures.</b> |  |  |
|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|

### 11.Course Evaluation

**The final exam (70 marks) / Mid-year exam (15 marks) / Practical sessions (OSCE) – 15 marks**

### 12.Learning and teaching resources

|                                                                                      |                                                                                                                |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Required textbooks (methodology if any)</b>                                       |                                                                                                                |
| <b>Main References (Sources)</b>                                                     | <b>[1] Essentials of General Surgery</b><br><b>[2] Nursing Care Guides</b><br><b>[3] Osmosis from Elsevier</b> |
| <b>Recommended supporting books and references (scientific journals, reports...)</b> |                                                                                                                |
| <b>Electronic references , websites</b>                                              |                                                                                                                |

### Course Description form:

|                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Course name:</b>                                                                                                                                                                                                                                   |
| <b>Physiology</b>                                                                                                                                                                                                                                        |
| <b>2. Course code :</b>                                                                                                                                                                                                                                  |
| <b>PHY002</b>                                                                                                                                                                                                                                            |
| <b>3. Semester/ Year :</b>                                                                                                                                                                                                                               |
| <b>First + Second / 2025-2026</b>                                                                                                                                                                                                                        |
| <b>4. Description Preparation Date</b>                                                                                                                                                                                                                   |
| <b>September 9 2025</b>                                                                                                                                                                                                                                  |
| <b>5. Available attendance forms:</b>                                                                                                                                                                                                                    |
| <b>Lectures and practical labs</b>                                                                                                                                                                                                                       |
| <b>6. Number of study hours (total) / Number of units) total:(</b>                                                                                                                                                                                       |
| <b>1800hours (120T, 60P) / 10 credits</b>                                                                                                                                                                                                                |
| <b>7. Course instructor name</b>                                                                                                                                                                                                                         |
| <b>Prof. Dr. Ihasan Ajeena</b><br><b>Prof. Dr. Talib Hussain Kamoona</b><br><b>Dr. Firas F. Al-Masoody</b><br><b>Dr. Ghufraan Bayan</b><br><b>Asst. Lect. Ameer Mohammed Kadhim</b>                                                                      |
| <b>8. Course objectives</b>                                                                                                                                                                                                                              |
| The course is designed for: <ul style="list-style-type: none"><li>• Equipping students with foundational knowledge of physiological principles, essential for comprehending the complex mechanisms governing bodily functions and homeostasis.</li></ul> |

- Fostering an in-depth understanding of cellular, organ, and systemic physiology, enabling students to grasp the intricate interplay between various physiological systems and their roles in maintaining health.
- Developing students' analytical and critical thinking skills, thereby enabling them to interpret and evaluate medical research findings and apply evidence-based approaches in clinical practice.
- Enhancing students' comprehension of the etiology and pathophysiology of diseases and disorders, facilitating accurate diagnosis and effective treatment strategies.
- Providing opportunities for students to integrate theoretical knowledge with clinical scenarios, through case studies, simulations, and practical exercises, thereby bridging the gap between theory and real-world medical practice.

## 9. Teaching and learning strategies

|                 |                                                                                                                                                      |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategy</b> | <b>Through a blend of theoretical instruction and hands-on laboratory sessions, students delve into the complexities of physiological processes.</b> |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|

## 10. Course structure

| <b>Week</b> | <b>Hour</b> | <b>Required learning outcomes</b> | <b>Name of unit or topic</b>                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Learning method</b> | <b>Evaluation method</b>                                                                                                              |
|-------------|-------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1-4         |             |                                   | <b>Respiratory System</b><br><br>1. Physiological functions of the lungs, Process of respiration: mechanics of breathing.<br><br>2. Lung volumes and capacities.<br><br>3. Compliance of the lung, role of surfactant.<br><br>4. Pulmonary and alveolar ventilation.<br><br>5. Transport of O <sub>2</sub> by the blood.<br><br>6. Transport of CO <sub>2</sub> by blood.<br><br>7. Role of the respiratory system in acid-base regulation. | Lecture                | <b>Daily quizzes (Formative and Summative Exams)</b><br><br><b>Reports</b><br><br><b>Practical exams</b><br><br><b>Mid-term Exams</b> |

|     |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                    |
|-----|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|
|     |  | <p>8. Regulation of breathing: voluntary and involuntary control.</p> <p>9. Regulation of breathing: ventilatory responses to CO<sub>2</sub> rise and O<sub>2</sub> lack.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | <b>Final Exams</b> |
| 5-9 |  | <p><b>CVS</b></p> <p>1. Functional design of CVS, structure of the heart and blood vessels.</p> <p>2. Properties of cardiac muscle-<br/>auto rhythmicity and<br/>conductivity.</p> <p>3. Properties of cardiac muscle-<br/>contractility &amp; refractory<br/>characteristics.</p> <p>4. Electrophysiology of the heart (ECG).</p> <p>5. Mechanical events in cardiac cycle.</p> <p>6. Heart sounds and murmurs.</p> <p>7. Cardiac output.</p> <p>8. Work and efficiency of the heart.</p> <p>9. Vascular system-condition of flow &amp; pressure.</p> <p>10. Blood pressure and its regulation</p> <p>11. Circulatory regulation, general nervous &amp; local peripheral mechanisms.</p> <p>12. Circulation through special regions; coronary, skeletal muscle. cerebral and skin circulation.</p> <p>13. Cardiovascular hemostasis, cardiac insufficiency, shock, and postural changes.</p> <p>14. Starling forces across capillary beds.</p> <p>Venous pressure and flow</p> |  |                    |

|       |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |
|-------|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 10-12 |  |  | <b>Renal System</b> <ol style="list-style-type: none"> <li>1. Renal circulation and glomerular filtration.</li> <li>2. Tubular reabsorption.</li> <li>3. Tubular secretion.</li> <li>4. Water excretion by the kidneys.</li> <li>5. Role of the kidney in electrolytes balance.</li> <li>6. Renal mechanisms of acidification of urine and its significance in the regulation of pH.</li> <li>7. Regulation of body fluid volume.</li> <li>8. Renal disease and diuresis.</li> <li>9. Renal function test</li> </ol> |  |  |
| 13-15 |  |  | <b>Body Fluid</b> <ol style="list-style-type: none"> <li>1. Discuss the major fluid compartments of the body and their relative volumes</li> <li>2. Describe the ionic composition of extracellular and intracellular fluid, their amount and distribution especially, sodium, potassium and calcium and the mechanism that control their distribution.</li> <li>3. Fluid compartment</li> <li>4. Water and electrolyte balance.</li> <li>5. Edema</li> </ol>                                                        |  |  |

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|-------|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 16-18 |  |  | <b>General principles of Gastrointestinal Function</b> <ol style="list-style-type: none"> <li>1. Oral Cavity: Salivary Glands, Esophagus</li> <li>2. Stomach-I: HCl secretion, Gastric Mucous Secretion</li> <li>3. Stomach-II: Regulation of Gastric Secretion</li> <li>4. Pancreas: Composition of pancreatic juice, Regulation of Pancreatic Secretion, Enzymatic component of Pancreatic Secretion</li> <li>5. Biliary System: Bile formation and Secretion, Regulation of Biliary Secretion, Enterohepatic circulation of bile salts.</li> <li>6. Digestion and Absorption-I: Digestion and Absorption of CHO and Proteins</li> <li>7. Digestion and Absorption-II: Digestion and Absorption of Lipid, Absorption of Water and Electrolytes from the Small intestine, Absorption in the Large Intestine</li> <li>8. Gastrointestinal Motility: Regulation of the function, Electrical Activity of the GI smooth muscles</li> </ol> |  |  |
| 19-21 |  |  | <b>Physiology of the Nervous System</b> <ol style="list-style-type: none"> <li>1. Generation of membrane potential of nerve cell.</li> <li>2. Excitation and conduction.</li> <li>3. Nerve action potential.</li> <li>4. Electrogenesis of the action potential.</li> <li>5. Orthodromic and antidromic conduction - properties of mixed nerves.</li> <li>6. Skeletal muscles</li> <li>7. The contractile response - muscle twitch.</li> <li>8. Properties of skeletal muscles in the intact organism – motor units.</li> <li>9. Energy source and metabolism.</li> <li>10. Strength-duration curve - cardiac</li> </ol>                                                                                                                                                                                                                                                                                                                |  |  |

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|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|  |  |  | <p>muscle.</p> <p>11. The smooth muscles.</p> <p>12. The neuromuscular junction.</p> <p>13. Autonomic nervous system, anatomical consideration - sympathetic and parasympathetic nervous systems.</p> <p>14. Types of autonomic innervation and reflex arc.</p> <p>15. Higher autonomic centers and neurotransmitters in autonomic nervous systems.</p> <p>16. Physiology of micturition.</p> |  |  |
|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|

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|-------|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 22-25 |  |  | <p>1-General sensation.</p> <p>2. Tactile vibration and position senses.</p> <p>3. Pain sensation.</p> <p>4. Spinal cord pathway and reflexes.</p> <p>5. Spinal cord transaction.</p> <p>6. Thalamus central representation of sensation</p> <p>7. Reticular activating system.</p> <p>8. Sleep and electroencephalography.</p> <p>9. Motor cortex and motor pathway.</p> <p>10. Basal ganglia.</p> <p>11. Cerebellum.</p> <p>12. Language learning and memory.</p> <p>13. Cerebrospinal fluid.</p> <p>Limbic system</p> |  |  |
| 29-30 |  |  | <p>1-Visual sensation.</p> <p>2. Hearing sensation.</p> <p>3. Vestibular Function.</p> <p>4. Taste.</p> <p>Smell.</p>                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |

|       |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |
|-------|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 26-28 |  |  | <p><b>Physiology of the Endocrine Glands</b></p> <ol style="list-style-type: none"> <li>1. Introduction to Endocrinology: Definitions, Types of Chemical Messengers, Properties of Hormones, Chemical Structure of Hormones, Transport of Hormones in the Blood.</li> <li>2. Hypothalamic and Pituitary Hormones.<br/>List of Pituitary Hormones (ant. &amp; post.), Action and Control of ADH Release, Oxytocin Function and Control of Oxytocin Release. Prolactin Function and Regulation.</li> <li>3. Growth hormone and Thyroid Gland &amp; Hormone: Growth hormone Secretion and Function, Abnormalities of GH secretion. Thyroid Hormone Function and Regulation of Secretion.</li> <li>4. Abnormalities of the Thyroid Hormones (Hyper- and Hypothyroidism), Myxedema</li> <li>5. Glucose Homeostasis-I: Insulin synthesis &amp; C-peptide, Insulin Receptors, Insulin Action in Muscle.</li> <li>6. Glucose Homeostasis-II: Effects of Insulin on the Liver &amp; Adipose Tissues, Factors affecting insulin secretion, Glucagon and its function, DM type I &amp; II.</li> <li>7. Calcium Homeostasis-I: Bone structure and remodeling, Calcium status in the body, Vitamin D synthesis and function.</li> <li>8. Calcium Homeostasis-II: Parathyroid hormone function, Regulation of PTH secretion, Calcitonin.</li> <li>9. Stress Physiology-I: Adrenal androgen, Action &amp; Regulation of Glucocorticoids, Disorders of Glucocorticoids Secretion, Action of Mineralocorticoids.</li> <li>10. Stress Physiology-II: Disorders of Aldosterone Secretion, Adrenal Hormone Synthesis and Synthesis, Adrenergic Receptors, Actions of Catecholamines</li> </ol> |  |  |
|-------|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|

|              |                     |  |                                                                                                                                                                                                                                                                                              |              |                                                                              |
|--------------|---------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------|
|              |                     |  | 11. Male and Female Reproductive System                                                                                                                                                                                                                                                      |              |                                                                              |
| 1-10 week S1 | 2 hours per session |  | Introduction to the physiology Lab<br>Phlebotomy<br>CBC (complete blood count)<br>WBC (white blood cells) count<br>ECG (Electrocardiogram) – 1<br>ECG (Electrocardiogram) – 2<br>Spirometry<br>Auscultation of the respiratory tract system<br>Blood film<br>GUE (general urine examination) | Lab Sessions | <b>Quizzes</b><br><b>Activities in the class</b><br><b>Final Examination</b> |
| 1-10 week S2 | 2 hours per session |  | Blood Groups & Rh system<br>Cross match<br>GSE (general stool examination)<br>CNE (Crania Nerves Examination) – 1<br>CNE (Crania Nerves Examination) – 2<br>Visual Acuity Examination<br>Visual Fields Examination<br>Rennie & Weber tests<br>PCV (Packed Cells Volume)<br>Bleeding Time     |              | <b>Quizzes</b><br><b>Activities in the class</b><br><b>Final Examination</b> |

### 13.Course Evaluation

For each semester: Evaluation semester 100%

10 % Grades quizzes exam,

20 % Grades theoretical mid-semester,

70% Grades final semester (Final practical 20 grades+ and Final theoretical 50 grades)

### 14.Learning and teaching resources

|                                                                                      |                                                                                                                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Required textbooks (methodology if any)</b>                                       | <b>1. Guyton &amp; Hall Text book of Medical Physiology,14th edition, 2021.</b><br><b>2. Ganong's Review of Medical Physiology, 26<sup>th</sup> edition 2021.</b> |
| <b>Main References (Sources)</b>                                                     |                                                                                                                                                                   |
| <b>Recommended supporting books and references (scientific journals, reports...)</b> |                                                                                                                                                                   |
| <b>Electronic references ,websites</b>                                               | <b>Additional resources are provided in each lecture separately if required</b>                                                                                   |

### Course Description form:

**1. Course name:**

**Crimes of Baath Party**

**2. Course code:**

CB002

3. semester/year:

2025-2026

4. File preparation date:

September 9 2025

5. Available attendance forms:

Lectures

6. Number of study hours (total) / Number of units (total):

30Hours/ 2 credits

7. Course instructor name;

Asst. Lect. Ali Akbar Khalid

8. Course objectives:

تهدف هذه المادة إلى تعليم الطالب أهم انتهاكات النظام البعثي للحقوق والحريات العامة، بالإضافة إلى تعريف الطالب سلوكيات النظام البعثي في المجتمع وتسلطه على الدولة، كما أنها تهدف إلى إلمام الطالب بأهم آثار القمع والحروب التي حصلت في ظل النظام البعثي على البيئة والسكان.

9. Teaching and learning methods

تهتم هذه المادة بدراسة حقبة مرت على الدولة العراقية عُرف عنها انتهاكها لحقوق الانسان وارتكابها لجرائم ضد الإنسانية واشتهارها بحقبة المقابر والابادات الجماعية وإعدامات المدنيين والعسكريين

10. Course structure:

| Week | Hours | Required Learning Outcomes | Unit or subject name                          | Learning method | Evaluation method |
|------|-------|----------------------------|-----------------------------------------------|-----------------|-------------------|
| 1    |       |                            | حملة عن الأنظمة السياسية في العراق            | Lectures        |                   |
| 2    |       |                            | انتهاكات النظام البعثي للحقوق والحريات العامة | =               |                   |

|    |  |  |                                                               |   |                                                                                                                                               |
|----|--|--|---------------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 3  |  |  | انتهاكاته الحقوق الفكرية<br>في ظل النظام البعثي               | = | <p><b>Daily<br/>quizzes<br/>(Formative<br/>and<br/>Summative<br/>Exams)</b></p> <p><b>Midterm<br/>Exams</b></p> <p><b>Final<br/>Exams</b></p> |
| 4  |  |  | انتهاكات الحقوق<br>السياسية في ظل النظام<br>البعثي            | = |                                                                                                                                               |
| 5  |  |  | انتهاكات الحقوق<br>الاقتصادية في ظل النظام<br>البعثي          | = |                                                                                                                                               |
| 6  |  |  | انتهاكات الحقوق<br>الاجتماعية في ظل النظام<br>البعثي          | = |                                                                                                                                               |
| 7  |  |  | انتهاكات الحقوق الثقافية<br>في ظل النظام<br>البعثي            | = |                                                                                                                                               |
| 8  |  |  | انتهاكات الحريات العامة<br>في ظل النظام<br>البعثي             | = |                                                                                                                                               |
| 9  |  |  | انتهاكات الحق في<br>التعددية الحزبية في<br>ظل النظام البعثي   | = |                                                                                                                                               |
| 10 |  |  | انتهاك حرية الرأي<br>والتعبير في ظل النظام<br>البعثي          | = |                                                                                                                                               |
| 11 |  |  | اسقاط الجنسية في ظل<br>النظام البعثي                          | = |                                                                                                                                               |
| 12 |  |  | أثر سلوكيات النظام<br>البعثي في المجتمع،<br>وتسلطه على الدولة | = |                                                                                                                                               |
| 13 |  |  | انتهاك حقوق الإنسان من                                        | = |                                                                                                                                               |

|    |  |  |                                                                                  |   |  |
|----|--|--|----------------------------------------------------------------------------------|---|--|
|    |  |  | خلال<br>الاعتقالات العشوائية<br>وتعذيب السجناء                                   |   |  |
| 14 |  |  | انتهاك حقوق الإنسان من<br>خلال إعدام<br>العسكريين والمدنيين                      | = |  |
| 15 |  |  | لفصل بين السلطات في<br>ظل النظام البعثي                                          | = |  |
| 16 |  |  | حصر السلطات الثالث بيد<br>النظام البعثي                                          | = |  |
| 17 |  |  | انتهاك السلطة التشريعية<br>في ظل النظام البعثي                                   | = |  |
| 18 |  |  | انتهاك السلطة التنفيذية<br>في ظل النظام البعثي                                   | = |  |
| 19 |  |  | انتهاك السلطة القضائية<br>في ظل النظام البعثي                                    | = |  |
| 20 |  |  | ثر المرحلة الانتقالية في<br>محاربة السياسة<br>الاستبدادية                        | = |  |
| 21 |  |  | الميدان النفسي                                                                   | = |  |
| 22 |  |  | الميدان الاجتماعي                                                                | = |  |
| 23 |  |  | الدين والدولة                                                                    | = |  |
| 24 |  |  | الثقافة والعالم وعسكرة<br>المجتمع                                                | = |  |
| 25 |  |  | أهم آثار القمع والحروب<br>التي حصلت في<br>ظل النظام البعثي على<br>البيئة والسكان | = |  |
| 26 |  |  | استعمال الأسلحة<br>المحرمة دولياً والتلوث<br>البيئي في ظل النظام                 | = |  |

|    |  |  |                                                                                |   |  |
|----|--|--|--------------------------------------------------------------------------------|---|--|
|    |  |  | البعثي                                                                         |   |  |
| 27 |  |  | سياسة الأرض المحروقة<br>في ظل النظام البعثي                                    | = |  |
| 28 |  |  | تجفيف الأهوار والهجرة<br>القسرية في ظل النظام<br>البعثي                        | = |  |
| 29 |  |  | تدمير البيئة الزراعية<br>والحيوانية والتلوث<br>الاشعاعي في ظل النظام<br>البعثي | = |  |
| 30 |  |  | المقابر الجماعية وقصف<br>دور العبادة في ظل النظام<br>البعثي                    | = |  |

### 11.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

### 12.Learning and Teaching sources

|                                                                    |                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Required textbooks (curricular books, if any)                      | <ul style="list-style-type: none"> <li>• منهاج جرائم حزب البعث البائد 2023 / دائرة الدراسات والتخطيط والمتابعة</li> </ul>                                                                                                                                                              |
| Main references (sources)                                          | <ul style="list-style-type: none"> <li>• التأسيس المعرفي لدراسة جرائم حزب البعث في العراق/ د. قيس ناصرو الأستاذ عبد الهادي معتوق</li> <li>• (حول جرائم الحرب وجرائم ضد السلم والإبادة العنصرية / جرجيس فتح الله</li> <li>• بعث صدام رؤية من داخل نظام استبدادي / يوسف ساسون</li> </ul> |
| Recommended books and references (scientific journals, reports...) |                                                                                                                                                                                                                                                                                        |
| Electronic References, Websites                                    | <p>(1) كيف ننسى وهذه جرائمهم / محمد الصالح الصديق</p> <p>(2) محاضرات في الحرية والديمقراطية / د. ولاء مهدي الجبوري</p> <p>(3) الحماية الدستورية للحقوق والحريات / د. أحمد</p>                                                                                                          |

### Course Description form:

|                                                       |
|-------------------------------------------------------|
| <b>1. Course name</b>                                 |
| Biochemistry + Clinical Chemistry                     |
| <b>2. Course code:</b>                                |
| CH002                                                 |
| <b>3. semester/year</b>                               |
| 1 <sup>st</sup> +2 <sup>nd</sup> semester / 2025-2026 |
| <b>4. File preparation date:</b>                      |
| September 9 2025                                      |
| <b>5. Available attendance forms</b>                  |

Lectures and practical labs

#### 6. Number of study hours(total) / total number of credits

135 hours / 7 credits

#### 7. Course instructor name

Asst. Prof. Dr. Ahmed Naseer kaftan Email: ahmedn.kaftan@uokufa.edu.iq

Asst. Lect. Huda Falah joodi huda.f.joodi@alkafeel.edu.iq

#### 8. Course objectives

**Upon successful completion of this course, students will be able to:**

- Explain the basic principles of clinical chemistry and its role in healthcare
- Linking changes in carbohydrate, fat and protein metabolism with various disease states
- Interpret common clinical chemistry tests used to evaluate kidney, liver, and electrolyte status
- To determine the potential clinical significance of abnormal laboratory findings in different disease contexts
- Explain the role of enzymes in metabolism and discuss the consequences of enzyme deficiency

Apply acquired knowledge to analyze case studies and clinical scenarios involving disorders related to the focus areas.

#### 10. Teaching and learning methods

- This course will combine lectures, discussions, case studies, and laboratory exercises to provide students with a comprehensive understanding of clinical chemistry and its importance in the diagnosis and management of human diseases. In addition, the course will include laboratory sessions, allowing students to gain practical experience in basic biochemical techniques.

#### 11. Course structure

| Week | Hours | Required Learning Outcomes | Unit or subject name | Learning method | Evaluation method |
|------|-------|----------------------------|----------------------|-----------------|-------------------|
|      |       |                            |                      |                 |                   |

|   |  |  |                                                                                     |                                |                                                                                                                                                                                           |
|---|--|--|-------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 |  |  | <b>Carbohydrate disorder:<br/>hyperglycemia, diabetes mellitus and hypoglycemia</b> | <b>Lectures + Lab sessions</b> | <b>Daily quizzes (Formative and Summative Exams)</b><br><br><b>Reports</b><br><br><b>Midterm Exams</b><br><br><b>Practical Final exams</b><br><br><b>Theory</b><br><br><b>Final exams</b> |
| 2 |  |  | <b>Serum lipids, normal metabolism and disorders</b>                                |                                |                                                                                                                                                                                           |
| 3 |  |  | <b>Serum lipids, normal metabolism and disorders</b>                                |                                |                                                                                                                                                                                           |
| 4 |  |  | <b>Renal functions, normal metabolism and disorders</b>                             |                                |                                                                                                                                                                                           |
| 5 |  |  | <b>Liver functions normal, disorders and drug detoxifications</b>                   |                                |                                                                                                                                                                                           |
| 6 |  |  | <b>Water and electrolyte metabolism, normal and disorders</b>                       |                                |                                                                                                                                                                                           |
| 7 |  |  | <b>Calcium and phosphate normal metabolism and disorders</b>                        |                                |                                                                                                                                                                                           |
| 8 |  |  | <b>Clinical enzymology: use of</b>                                                  |                                |                                                                                                                                                                                           |

|           |  |  |                                                                                                                                              |                 |                                                                            |
|-----------|--|--|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------|
|           |  |  | <b>enzymes in clinical diagnosis,<br/>isoenzymes, their clinical significance</b>                                                            |                 |                                                                            |
| <b>9</b>  |  |  | <b>Clinical enzymology: use of enzymes in clinical diagnosis,<br/>isoenzymes, their clinical significance</b>                                |                 |                                                                            |
| <b>10</b> |  |  | <b>Porphyria metabolism and disorders,<br/>hemoglobinopathies, disorders of iron metabolism and significance of related laboratory tests</b> |                 |                                                                            |
| <b>1</b>  |  |  | <b>Renal disorders</b>                                                                                                                       | <b>Lectures</b> | <b>Daily quizzes (Formative and Summative Exams)</b><br><br><b>Reports</b> |
| <b>2</b>  |  |  | <b>Liver disorders</b>                                                                                                                       | <b>=</b>        |                                                                            |
| <b>3</b>  |  |  | <b>Electrolytes (Na,K,Ca) disorders</b>                                                                                                      | <b>=</b>        |                                                                            |
| <b>4</b>  |  |  | <b>Acid base disorders</b>                                                                                                                   | <b>=</b>        |                                                                            |

|    |  |  |                               |   |                 |
|----|--|--|-------------------------------|---|-----------------|
| 5  |  |  | Diabetes and obesity          | = | Practical exams |
| 6  |  |  | Thyroid disorders             | = |                 |
| 7  |  |  | Pituitary disorders           | = |                 |
| 8  |  |  | Adrenal disorders             | = | Midterm Exams   |
| 9  |  |  | Male reproductive disorders   | = |                 |
| 10 |  |  | Female reproductive disorders | = | Final Exams     |
| 11 |  |  |                               | = |                 |

## 12.Course Evaluation

For each semester: Evaluation semester 100%

- 10 % Grades quizzes exam,
- 20 % Grades theoretical mid-semester,
- 70% Grades final semester (Final practical 20 grades+ and Final theoretical 50

grades)

## 13.Learning and Teaching sources

|                                                                    |                                                                                                                                                                           |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Required textbooks (curricular books, if any)                      | <ul style="list-style-type: none"> <li>• Clinical Chemistry &amp; Metabolic Medicine. Martin Crook</li> <li>• Clinical Biochemistry (Lecture Notes), Peter Rae</li> </ul> |
| Main references (sources)                                          | <ul style="list-style-type: none"> <li>• Clinical Chemistry &amp; Metabolic Medicine. Martin Crook</li> <li>• Clinical Biochemistry (Lecture Notes), Peter Rae</li> </ul> |
| Recommended books and references (scientific journals, reports...) |                                                                                                                                                                           |
| Electronic References, Websites                                    |                                                                                                                                                                           |