

**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 Al-Ayen Iraqi University**

**2024**

## **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 its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

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:

**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 (quarterly, annual, Bologna Process) 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.

## Academic Program Description Form

**University Name:** ALAyen Iraqi National University

**Faculty/Institute:** College of Health and Medical Technologies

**Scientific Department:** . Dept. of Anesthesia techniques

**Academic or Professional Program Name:** College of Health and Medical Technologies/Department of Anesthesia Technologies

**Final Certificate Name:** Bachelor of Anesthesia Techniques

**Academic System:** annual

**Description Preparation Date:**

**File Completion Date:**

**Signature:**

**Head of Department Name:**

**Date:**

**Signature:**

**Scientific Associate Name:**

**Date:**

**The file is checked by:**

**Department of Quality Assurance and University Performance**

**Director of the Quality Assurance and University Performance Department:**

**Date:**

**Signature:**

**Approval of the Dean**

### **1. Program Vision**

The Department of Anesthesia will be a distinguished academic and research center at the local and international levels, contributing to the development of the field of anesthesia and providing quality health services.

### **2. Program Mission**

Preparing specialized cadres in the field of anesthesia capable of providing distinguished medical services, and promoting scientific research to develop medical technologies in a way that contributes to serving society and achieving sustainable development.

### **3. Program Objectives**

1. Providing high-quality education in the field of anesthesia through an advanced academic environment.
2. Establishing advanced laboratories that allow practical training according to the latest medical technologies.
3. Encouraging scientific research and creativity in the field of anesthesia and related specialties.
4. Enhancing cooperation with health institutions and research centers locally and internationally.
5. Qualifying graduates capable of meeting the needs of the labor market and contributing to improving health care.
6. Establishing a virtual operating room that simulates what is found in teaching hospitals
7. Utilizing artificial intelligence technologies to develop students' skills

|  |
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|  |
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#### 4. Program Accreditation

Under preparation

#### 5. Other external influences

|  |
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#### 6. Program Structure

| Program Structure        | Number of Courses | Credit hours | Percentage | Reviews* |
|--------------------------|-------------------|--------------|------------|----------|
| Institution Requirements |                   |              |            |          |
| College Requirements     |                   |              |            |          |
| Department Requirements  |                   |              |            |          |
| Summer Training          |                   |              |            |          |
| Other                    |                   |              |            |          |

\* This can include notes whether the course is basic or optional.

#### 7. Program Description

| Year/Level | Course Code | Course Name | Credit Hours |  |
|------------|-------------|-------------|--------------|--|
|            |             |             |              |  |
|            |             |             |              |  |

#### 8. Expected learning outcomes of the program

##### A.Knowledge

|                   |                                                                                                         |
|-------------------|---------------------------------------------------------------------------------------------------------|
| Learning Outcomes | 1.Understanding human anatomy, organ functions, and pathophysiology related to anesthesia procedures. 1 |
|-------------------|---------------------------------------------------------------------------------------------------------|

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <p>2. Knowing the basic principles of the effect of anesthetic and analgesic drugs on different body systems. 2</p> <p>3. Describe the the types and objectives of anesthesia methods (general, local, and regional) and choosing the appropriate method for each case.</p> <p>4. Knowing the principles of safety during anesthesia, including the management of complications and understanding international and local protocols in the field of anesthesia.</p>                                                                                       |
| <b>B.Skills</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Learning Outcomes | <p>1.The ability to assess the health status of patients before surgery, including collecting medical history and conducting necessary examinations.</p> <p>2.Skills to insert devices such as breathing tubes and intravenous catheters accurately and safely.</p> <p>3.Monitoring the patient's vital functions during and after the operation, and using modern medical devices.</p> <p>4. Preparing and injecting anesthetic drugs and controlling appropriate doses according to the case and identifying and managing side effects efficiently.</p> |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>C.Ethics</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Learning Outcomes | <p>1.Commitment to the highest standards of quality in providing medical care.</p> <p>2.Interact with modern developments in the field of anesthesia and healthcare technologies.</p> <p>3.Act with integrity and honesty in all medical practices.</p> <p>4.Commitment to updating knowledge and skills through participation in training courses and scientific conferences</p>                                                                                                                                                                         |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| <b>9. Teaching and Learning Strategies</b>                                                       |
| <b>Blended learning</b>                                                                          |
| <ul style="list-style-type: none"> <li>• Lectures (Interactive)</li> </ul>                       |
| <b>Online Lectures (Interactive)</b>                                                             |
| <b>Tutorial</b>                                                                                  |
| <b>Role play</b>                                                                                 |
| <b>Computer-based learning (computers e-learning, free downloadable software usage, Webinar)</b> |
| <b>Team-based learning (group dissuasion, presentation)</b>                                      |
| <b>Discussion</b>                                                                                |
| <b>Case study</b>                                                                                |
| <b>Problem solving</b>                                                                           |

## 10. Evaluation methods

Midterm and final exam  
Evaluations

## 11. Faculty

### Faculty Members

| Academic Rank                                     | Specialization                 |                      | Special Requirements/Skills (if applicable) |  | Number of the teaching staff |          |
|---------------------------------------------------|--------------------------------|----------------------|---------------------------------------------|--|------------------------------|----------|
|                                                   | General                        | Special              |                                             |  | Staff                        | Lecturer |
| Assistant <b>Lecturer</b><br><br>Qasim Kani Hayif | Medical<br>surgical<br>nursing | internal<br>medicine |                                             |  |                              |          |

## Professional Development

### Mentoring new faculty members

### Professional development of faculty members

1. Participation in training courses held within the college.
2. Participation in professional courses held within the college within the prescribed curricula, as well as professional education courses
3. There are specific units within the personal development programme that give students the opportunity and encourage them to engage in professionally relevant qualifications that allow students to reflect on their professional development.

## 12. Acceptance Criterion

This is done according to the acceptance rate in the medical group (College of Medical and Health Technologies)



### **13. The most important sources of information about the program**

**1. The official website of the college or university:** Colleges and universities provide a special section on their official websites that contains:

- Description of the study program.
- Curricula and academic plan.
- Admission and registration requirements.
- Job opportunities after graduation.

Example: Visit the website of the Ministry of Higher Education or the website of the technical university that offers the program.

#### **2. Academic guides**

Academic guides published by colleges, such as the student guide, which contain comprehensive information about the program, objectives, and study plans.

Department Professors

Communicating with program professors or teaching staff is a valuable resource for understanding the nature of the study, its requirements, and its future prospects.

#### **4. Program Students and Graduates**

Current students or graduates can share their personal experience about the program, its difficulties, and the best ways to succeed in it.

#### **5. Scientific articles and research**

View research and articles related to anesthesia techniques published in:

Medical journals.

Academic databases such as PubMed, Elsevier, Springer.

#### **6. Specialized books and references**

Scientific books on anesthesia techniques, including topics such as:

Basics of anesthesia.

Use of devices and technology in anesthesia.

Critical case management.

## **7. Conferences and workshops**

Attend medical conferences or workshops that address the latest developments in the field of anesthesia techniques.

## **14. Program Development Plan**

### **1. Curriculum Development**

- **Updating Academic Content:**

- Introduce new courses covering advanced anesthesia techniques, such as smart anesthesia and image-guided anesthesia.
- Add specialized courses in emerging fields, such as pediatric and geriatric anesthesia techniques.

- **Aligning with Global Standards:**

- Benchmark the curriculum against similar international programs and ensure compliance with global accreditation standards.

- **Enhancing Practical Training:**

- Increase the number of hours dedicated to hands-on training in hospitals

### **2. Upgrading Infrastructure**

- **Modern Laboratories:**

- Equip simulation labs with advanced anesthesia systems to train students for real-world scenarios.

- **Advanced Equipment:**

- Provide state-of-the-art devices, such as automated anesthesia machines, patient monitoring systems, and mechanical ventilators.

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### **3. Strengthening Practical and Clinical Training**

- **Partnerships with Hospitals:**

- Establish agreements with leading hospitals and medical centers to offer students extensive field training opportunities.

- **Advanced Training Programs:**

- Provide specialized training opportunities locally and internationally, such as regional anesthesia and advanced surgical anesthesia.

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#### **4. Faculty Development**

- **Skill Enhancement for Instructors:**

- Offer training workshops for faculty members on the latest techniques and teaching methodologies.
- Recruit professionals and practitioners in the field of anesthesia to enrich the teaching experience and bring practical expertise.

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#### **5. Advancing Scientific Research**

- **Encouraging Student Research:**

- Motivate students to conduct research on anesthesia techniques and present their findings at scientific conferences.

#### **6. Developing Students' Professional and Soft Skills**

- **Soft Skills Training:**

- Conduct workshops on communication skills for interacting with medical teams and patients.

- **Safety and Quality Principles:**

- Promote a culture of patient safety and risk management during surgeries.

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#### **7. Enhancing Employment Opportunities for Graduates**

- **Graduate Follow-Up Office:**

- Support graduates in securing job opportunities through partnerships with hospitals and healthcare facilities.

- **Career Fairs:**

- Organize career fairs to connect students with employers in the healthcare sector.

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#### **8. Integrating Technology in Education**

- **E-Learning Platforms:**

- Implement e-learning systems and virtual simulation tools for teaching theoretical and practical courses.

#### **9. Community Engagement**

- **Raising Awareness of Anesthesia Technologists' Role:**

- Organize seminars and awareness campaigns to highlight the importance of the anesthesia technologist profession.

- **Continuous Education Programs:**

- Offer continuing education programs for professionals to update their skills and knowledge.

| Program Skills Outline |             |                   |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|------------------------|-------------|-------------------|-------------------|------------------------------------|----|----|----|--------|----|----|----|--------|----|----|----|
|                        |             |                   |                   | Required program Learning outcomes |    |    |    |        |    |    |    |        |    |    |    |
| Year/Level             | Course Code | Course Name       | Basic or optional | Knowledge                          |    |    |    | Skills |    |    |    | Ethics |    |    |    |
|                        |             |                   |                   | A1                                 | A2 | A3 | A4 | B1     | B2 | B3 | B4 | C1     | C2 | C3 | C4 |
| Level three            | MTAN2003    | internal medicine | basic             | √                                  |    |    |    |        |    |    |    | √      |    | √  |    |
|                        |             |                   |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                   |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                   |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                   |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                   |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                   |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                   |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |

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

## Course Description Form

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Course Name:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                |
| internal medicine (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                |
| <b>2. Course Code: MTAN2003</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                |
| internal medicine (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                |
| <b>3. Semester / Year: Semester</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                |
| Semester (1) / second level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                |
| <b>4. Description Preparation Date:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                |
| 30/4/2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                |
| <b>5. Available Attendance Forms:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                |
| Full-time and official attendance hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                |
| <b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                |
| Lecture: 2 , Practical: 2 , Total: 4 (2+2 )                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                |
| <b>7. Course administrator's name (mention all, if more than one name)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                |
| Name: Ass. Lec. Qasim Kani Hayif<br>Email: qasimkani@gmail.com                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                |
| <b>8. Course Objectives</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                |
| <p>General goal: To familiarize students with all chronic diseases that affect the body's organs and blood.</p> <p>Special goals:</p> <p>At the end of the year, the student will be able to distinguish the signs of the symptoms that affect him.</p> <ul style="list-style-type: none"> <li>-1 Respiratory system.</li> <li>-2 Digestive system.</li> <li>-3 The renal and urinary system and the kidneys.</li> <li>-4 Or the land of the liver.</li> <li>-5 Mother of the endocrine glands.</li> </ul> |                                                                                                                                                                                                                                                                                |
| <b>9. Teaching and Learning Strategies</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                |
| <b>Strategy</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p><b>Blended learning</b></p> <ul style="list-style-type: none"> <li>• Lectures (Interactive)</li> <li>Online Lectures (Interactive)</li> <li>Role play</li> <li>Team-based learning (group dissuasion, presentation)</li> <li>Discussion</li> <li>Problem solving</li> </ul> |

| 10. Course Structure |       |                            |                                                                                      |                                                                                                                                                  |                                             |
|----------------------|-------|----------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Week                 | Hours | Required Learning Outcomes | Unit or subject name                                                                 | Learning method                                                                                                                                  | Evaluation method                           |
| 1                    | 2     | A 1<br>C1/ C3              | <b>Pulmonary T.B..</b>                                                               | Lectures (Interactive)<br>Online<br>Lectures (Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 2                    | 2     | A 1<br>C1/ C3              | <b>Pulmonary T.B.</b>                                                                | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving  | Midterm exams<br>Final exams<br>evaluations |
| 3                    | 2     | A 1<br>C1/ C3              | <b>Chronic obstructive pulmonary diseases: chronic bronchitis, emphysema, asthma</b> | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving  | Midterm exams<br>Final exams<br>evaluations |
| 4                    | 2     | A 1<br>C1/ C3              | <b>Chronic obstructive pulmonary diseases: chronic bronchitis, emphysema, asthma</b> | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)                                   | Midterm exams<br>Final exams<br>evaluations |

|   |   |               |                                                               |                                                                                                                                                 |                                             |
|---|---|---------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|   |   |               |                                                               | Discussion<br>Problem solving                                                                                                                   |                                             |
| 5 | 2 | A 1<br>C1/ C3 | <b>Tumors of the lung</b>                                     | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 6 | 2 | A 1<br>C1/ C3 | <b>Tumors of the lung.</b>                                    | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 7 | 2 | A 1<br>C1/ C3 | <b>Vascular lung disease: pulmonary<br/>thrombo-embolism</b>  | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 8 | 2 | A 1<br>C1/ C3 | <b>Vascular lung disease: pulmonary<br/>thrombo-embolism.</b> | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |

|    |   |               |                                                                                           |                                                                                                                                                  |                                             |
|----|---|---------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| 9  | 2 | A 1<br>C1/ C3 | <b>Respiratory failure : definition, types, management..</b>                              | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>(presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 10 | 2 | A 1<br>C1/ C3 | <b>Respiratory failure : definition, types, management.</b>                               | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>(presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 11 | 2 | A 1<br>C1/ C3 | <b>Diseases of the pleura: pleural effusion: types, causes, investigation, treatment.</b> | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>(presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 12 | 2 | A 1<br>C1/ C3 | <b>Diabetes mellitus: definition/clinical features/ complications/ treatment</b>          | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>(presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 13 | 2 | A 1           | <b>Diabetes mellitus: definition/clinical features/ complications/ treatment</b>          | Lectures (Interactive)                                                                                                                           | Midterm exams                               |



|    |   |               |                                                                                     |                                                                                                                                                 |                                             |
|----|---|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|    |   | C1/ C3        |                                                                                     | OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving                           | Final exams<br>evaluations                  |
| 14 | 2 | A 1<br>C1/ C3 | <b>Cushing syndrome: diagnosis, clinical features, Investigations and treatment</b> | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 15 | 2 | A 1<br>C1/ C3 | <b>Disturbances of water and electrolytes.</b>                                      |                                                                                                                                                 |                                             |

### 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 Resources

|                                                                    |                                                                                                                                                      |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Required textbooks (curricular books, if any)                      | Non                                                                                                                                                  |
| Main references (sources)                                          | <b>Oxford hand book of clinical medicine, sixth edition, Longmore, Murray,2004</b><br><b>Harrisons principle of internal medicine 2th edition 20</b> |
| Recommended books and references (scientific journals, reports...) | <b>Davidson's Principles and Practice of Medicine</b>                                                                                                |
| Electronic References, Websites                                    | University educational platform                                                                                                                      |



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**2025**

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**Scientific Department:** . Dept. of Anesthesia techniques

**Academic or Professional Program Name:** College of Health and Medical Technologies/Department of Anesthesia Technologies

**Final Certificate Name:** Bachelor of Anesthesia Techniques

**Academic System:** annual

**Description Preparation Date:** 15-3-2025

**File Completion Date:** 15-3-2025

**Signature:**

**Head of Department Name:**

**Date:**

**Signature:**

**Scientific Associate Name:**

**Date:**

**The file is checked by:**

**Department of Quality Assurance and University Performance**

**Director of the Quality Assurance and University Performance Department:**

**Date:**

**Signature:**

**Approval of the Dean**

### **1. Program Vision**

The Department of Anesthesia will be a distinguished academic and research center at the local and international levels, contributing to the development of the field of anesthesia and providing quality health services.

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#### 4. Program Accreditation

Under preparation

#### 5. Other external influences

#### 6. Program Structure

| Program Structure        | Number of Courses | Credit hours | Percentage | Reviews* |
|--------------------------|-------------------|--------------|------------|----------|
| Institution Requirements |                   |              |            |          |
| College Requirements     |                   |              |            |          |
| Department Requirements  |                   |              |            |          |
| Summer Training          |                   |              |            |          |
| Other                    |                   |              |            |          |

\* This can include notes whether the course is basic or optional.

#### 7. Program Description



| Year/Level | Course Code | Course Name | Credit Hours |  |
|------------|-------------|-------------|--------------|--|
|            |             |             |              |  |
|            |             |             |              |  |

| 8. Expected learning outcomes of the program |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A.Knowledge                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Learning Outcomes                            | 1.Understanding human anatomy, organ functions, and pathophysiology related to anesthesia procedures. 1<br>2. Knowing the basic principles of the effect of anesthetic and analgesic drugs on different body systems. 2<br>3. Describe the the types and objectives of anesthesia methods (general, local, and regional) and choosing the appropriate method for each case.<br>4. Knowing the principles of safety during anesthesia, including the management of complications and understanding international and local protocols in the field of anesthesia. |
| B.Skills                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Learning Outcomes                            | 1.The ability to assess the health status of patients before surgery, including collecting medical history and conducting necessary examinations.<br>2.Skills to insert devices such as breathing tubes and intravenous catheters accurately and safely.<br>3.Monitoring the patient's vital functions during and after the operation, and using modern medical devices.<br>4. Preparing and injecting anesthetic drugs and controlling appropriate doses according to the case and identifying and managing side effects efficiently.                          |
|                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| C.Ethics                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Learning Outcomes                            | 1.Commitment to the highest standards of quality in providing medical care.<br>2.Interact with modern developments in the field of anesthesia and healthcare technologies.<br>3.Act with integrity and honesty in all medical practices.<br>4.Commitment to updating knowledge and skills through participation in training courses and scientific conferences                                                                                                                                                                                                  |
|                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| 9. Teaching and Learning Strategies                                                              |
|--------------------------------------------------------------------------------------------------|
| <b>Blended learning</b> <ul style="list-style-type: none"> <li>Lectures (Interactive)</li> </ul> |
| <b>Online Lectures (Interactive)</b>                                                             |
| <b>Tutorial</b>                                                                                  |

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| <b>Role play</b>                                                                                 |
| <b>Computer-based learning (computers e-learning, free downloadable software usage, Webinar)</b> |
| <b>Team-based learning (group discussion, presentation)</b>                                      |
| <b>Discussion</b>                                                                                |
| <b>Case study</b>                                                                                |
| <b>Problem solving</b>                                                                           |

|                                       |
|---------------------------------------|
| <b>10. Evaluation methods</b>         |
| Midterm and final exam<br>Evaluations |

| 11. Faculty     |                       |                       |                                             |  |                              |          |
|-----------------|-----------------------|-----------------------|---------------------------------------------|--|------------------------------|----------|
| Faculty Members |                       |                       |                                             |  |                              |          |
| Academic Rank   | Specialization        |                       | Special Requirements/Skills (if applicable) |  | Number of the teaching staff |          |
|                 | General               | Special               |                                             |  | Staff                        | Lecturer |
| Lecturer        | Anesthesia Technology | Anesthesia Technology |                                             |  |                              | 1        |

|                                                    |
|----------------------------------------------------|
| <b>Professional Development</b>                    |
| <b>Mentoring new faculty members</b>               |
|                                                    |
| <b>Professional development of faculty members</b> |

1. Participation in training courses held within the college.
2. Participation in professional courses held within the college within the prescribed curricula, as well as professional education courses
3. There are specific units within the personal development programme that give students the opportunity and encourage them to engage in professionally relevant qualifications that allow students to reflect on their professional development.

## **12. Acceptance Criterion**

This is done according to the acceptance rate in the medical group (College of Medical and Health Technologies) within the electronic form approved by the Ministry of Higher Education and Scientific Research.

## **13. The most important sources of information about the program**

**1.The official website of the college or university: Colleges and universities provide a special section on their official websites that contains:**

- Description of the study program.
- Curricula and academic plan.
- Admission and registration requirements.
- Job opportunities after graduation.

Example: Visit the website of the Ministry of Higher Education or the website of the technical university that offers the program.

### **2. Academic guides**

Academic guides published by colleges, such as the student guide, which contain comprehensive information about the program, objectives, and study plans.

Department Professors

Communicating with program professors or teaching staff is a valuable resource for understanding the nature of the study, its requirements, and its future prospects.

#### **4. Program Students and Graduates**

Current students or graduates can share their personal experience about the program, its difficulties, and the best ways to succeed in it.

#### **5. Scientific articles and research**

View research and articles related to anesthesia techniques published in:  
Medical journals.

Academic databases such as PubMed, Elsevier, Springer.

#### **6. Specialized books and references**

Scientific books on anesthesia techniques, including topics such as:

Basics of anesthesia.

Use of devices and technology in anesthesia.

Critical case management.

#### **7. Conferences and workshops**

Attend medical conferences or workshops that address the latest developments in the field of anesthesia techniques.

### **14. Program Development Plan**

#### **. Curriculum Development**

- **Updating Academic Content:**

- Introduce new courses covering advanced anesthesia techniques, such as smart anesthesia and image-guided anesthesia.
- Add specialized courses in emerging fields, such as pediatric and geriatric anesthesia techniques.

- **Aligning with Global Standards:**

- Benchmark the curriculum against similar international programs and ensure compliance with global accreditation standards.

- **Enhancing Practical Training:**

- Increase the number of hours dedicated to hands-on training in hospitals

## **2. Upgrading Infrastructure**

- **Modern Laboratories:**

- Equip simulation labs with advanced anesthesia systems to train students for real-world scenarios.

- **Advanced Equipment:**

- Provide state-of-the-art devices, such as automated anesthesia machines, patient monitoring systems, and mechanical ventilators.

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## **3. Strengthening Practical and Clinical Training**

- **Partnerships with Hospitals:**

- Establish agreements with leading hospitals and medical centers to offer students extensive field training opportunities.

- **Advanced Training Programs:**

- Provide specialized training opportunities locally and internationally, such as regional anesthesia and advanced surgical anesthesia.

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## **4. Faculty Development**

- **Skill Enhancement for Instructors:**

- Offer training workshops for faculty members on the latest techniques and teaching methodologies.
- Recruit professionals and practitioners in the field of anesthesia to enrich the teaching experience and bring practical expertise.

---

## **5. Advancing Scientific Research**

- **Encouraging Student Research:**

- Motivate students to conduct research on anesthesia techniques and present their findings at scientific conferences.

## **6. Developing Students' Professional and Soft Skills**

- **Soft Skills Training:**

- Conduct workshops on communication skills for interacting with medical teams and patients.

- **Safety and Quality Principles:**

- Promote a culture of patient safety and risk management during surgeries.

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## **7. Enhancing Employment Opportunities for Graduates**

- **Graduate Follow-Up Office:**

- Support graduates in securing job opportunities through partnerships with hospitals and healthcare facilities.

- **Career Fairs:**

- Organize career fairs to connect students with employers in the healthcare sector.
- 

## **8. Integrating Technology in Education**

- **E-Learning Platforms:**

- Implement e-learning systems and virtual simulation tools for teaching theoretical and practical courses.

## **9. Community Engagement**

- **Raising Awareness of Anesthesia Technologists' Role:**

- Organize seminars and awareness campaigns to highlight the importance of the anesthesia technologist profession.

- **Continuous Education Programs:**

- Offer continuing education programs for professionals to update their skills and knowledge.

| Program Skills Outline |             |                             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|------------------------|-------------|-----------------------------|-------------------|------------------------------------|----|----|----|--------|----|----|----|--------|----|----|----|
|                        |             |                             |                   | Required program Learning outcomes |    |    |    |        |    |    |    |        |    |    |    |
| Year/Level             | Course Code | Course Name                 | Basic or optional | Knowledge                          |    |    |    | Skills |    |    |    | Ethics |    |    |    |
|                        |             |                             |                   | A1                                 | A2 | A3 | A4 | B1     | B2 | B3 | B4 | C1     | C2 | C3 | C4 |
| Level two              |             | Basic of intensive care (2) | Basic             | √                                  | √  |    | √  | √      | √  | √  | √  | √      | √  | √  | √  |
|                        |             |                             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |                             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |

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

## Course Description Form

|                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Basic of intensive care (2)</b>                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2. Course Code:                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| (2)                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3. Semester / Year:                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Semester (2) / 3 <sup>rd</sup> level                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4. Description Preparation Date:                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 15/3/2025                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 5. Available Attendance Forms:                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Full-time and official attendance hours                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6. Number of Credit Hours (Total) / Number of Units (Total)                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Lecture: 2 , Practical: 2 , Total: 4 (2+2 )                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 7. Course administrator's name (mention all, if more than one name)                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Name: Lecture Hussein Ali Hussein<br>Email: <a href="mailto:hussein.hussein@alayen.edu.iq">hussein.hussein@alayen.edu.iq</a>                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 8. Course Objectives                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p>General objective: The teaching of the course aims to provide students with knowledge about the basics of dealing with patients and the use and maintenance of intensive care equipment in intensive care units.</p> | <p>Specific objectives: - At the end of the year, the student will be able to:</p> <ol style="list-style-type: none"> <li>1- Form a general idea about intensive care, its types and design.</li> <li>2- Deal with, use and operate intensive care devices.</li> <li>3- Be able to provide health care and observe the principles of occupational safety for himself and the patient in intensive care.</li> <li>4- Maintain and follow up on the devices for patient care.</li> </ol> |
| 9. Teaching and Learning Strategies                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Strategy</b>                                                                                                                                                                                                         | <p><b>Blended learning</b></p> <ul style="list-style-type: none"> <li>• Lectures (Interactive)</li> <li>Online Lectures (Interactive)</li> <li>Role play</li> <li>Team-based learning (group discussion, presentation)</li> <li>Discussion</li> <li>Problem solving</li> </ul>                                                                                                                                                                                                         |



| 10. Course Structure |       |                                         |                                                             |                                                                                                                                               |                                          |
|----------------------|-------|-----------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Week                 | Hours | Required Learning Outcomes              | Unit or subject name                                        | Learning method                                                                                                                               | Evaluation method                        |
| 1                    | 2     | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>clinical monitoring in ICU (respiratory monitoring).</b> | Lectures (Interactive)<br>Online<br>Lectures (Interactive)<br>Role play<br>Team-based learning presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams evaluations |
| 2                    | 2     | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>clinical monitoring in ICU (respiratory monitoring).</b> | Lectures (Interactive)<br>OnlineLectures (Interact<br>Role play<br>Team-based learning presentation)<br>Discussion<br>Problem solving         | Midterm exams<br>Final exams evaluations |
| 3                    | 2     | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>Asthma and COPD in ICU</b>                               | Lectures (Interactive)<br>OnlineLectures (Interact<br>Role play<br>Team-based learning presentation)<br>Discussion<br>Problem solving         | Midterm exams<br>Final exams evaluations |
| 4                    | 2     | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>Asthma and COPD in ICU</b>                               | Lectures (Interactive)<br>OnlineLectures (Interact<br>Role play<br>Team-based learning presentation)<br>Discussion                            | Midterm exams<br>Final exams evaluations |

|   |   |                                         |                       |                                                                                                                                              |                                             |
|---|---|-----------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|   |   |                                         |                       | Problem solving                                                                                                                              |                                             |
| 5 | 2 | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>ARDS and ALI</b>   | Lectures (Interactive)<br>OnlineLectures (Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 6 | 2 | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>ARDS and ALI</b>   | Lectures (Interactive)<br>OnlineLectures (Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 7 | 2 | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>cardiac arrest</b> | Lectures (Interactive)<br>OnlineLectures (Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 8 | 2 | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>cardiac arrest</b> | Lectures (Interactive)<br>OnlineLectures (Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 9 | 2 | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>cardiac arrest</b> | Lectures (Interactive)<br>OnlineLectures (Interactive)<br>Role play<br>Team-based learning                                                   | Midterm exams<br>Final exams<br>evaluations |

|    |   |                                         |                                                         |                                                                                                                                          |                                             |
|----|---|-----------------------------------------|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|    |   |                                         |                                                         | presentation)<br>Discussion<br>Problem solving                                                                                           |                                             |
| 10 | 2 | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>IV Fluids</b>                                        | Lectures (Interactive)<br>OnlineLectures (Interact<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 11 | 2 | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>blood transfusion</b>                                | Lectures (Interactive)<br>OnlineLectures (Interact<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 12 | 2 | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>status epilepticus</b>                               | Lectures (Interactive)<br>OnlineLectures (Interact<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 13 | 2 | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>head injury<br/>and management<br/>increased ICP</b> | Lectures (Interactive)<br>OnlineLectures (Interact<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 14 | 2 | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>acid-base balance<br/>and disorders</b>              | Lectures (Interactive)<br>OnlineLectures (Interact                                                                                       | Midterm exams<br>Final exams                |

|    |   |                                         |                                            |                                                                                                                                          |                                             |
|----|---|-----------------------------------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|    |   |                                         |                                            | Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving                                                       | evaluations                                 |
| 15 | 2 | A 1/A2/A4<br>B1/B2/B3/B4<br>C1/C2/C3/C4 | <b>acid-base balance<br/>and disorders</b> | Lectures (Interactive)<br>OnlineLectures (Interact<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |

### 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 Resources

|                                                                    |                                                                                                                                                                                                            |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Required textbooks (curricular books, if any)                      | Non                                                                                                                                                                                                        |
| Main references (sources)                                          | 1.Morgan and Mikhail's clinical anesthesiology 6th edition (McGraw 2018)<br>2.Marino's The ICU Book 4 <sup>th</sup> edition.<br>3.Textbook of critical care – Jean-Louis Vincent; Fred Moore (7th edition) |
| Recommended books and references (scientific journals, reports...) | 1.Handbook of ICU Therapy, 3 <sup>rd</sup> edition.                                                                                                                                                        |
| Electronic References, Websites                                    | University educational platform                                                                                                                                                                            |

**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 Al-Ayen Iraqi University**

**2024**

## **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 its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

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:**

**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 (quarterly, annual, Bologna Process) 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.

## Academic Program Description Form

**University Name:** Al Ayen Iraqi University

**College/Institute:** College of Health and Medical Technologies

**Scientific Department:** Department of Anesthesia Technology.

**Name of Academic or Professional Program:** Anesthesia Technology

**Name of Final Degree:** Bachelor of Anesthesia Technology

**Study System:** Courses

**Description Preparation Date:** 10/16/2024

**File Filling Date:** 1/18/2025

**Signature:**

**Head of Department Name:**

**Date:**

**Signature:**

**Scientific Associate Name:**

**Date:**

**The file is checked by:**

**Department of Quality Assurance and University Performance**

**Director of the Quality Assurance and University Performance Department:**

**Date:**

**Signature:**

**Approval of the Dean**



### **1. Program Vision**

To establish the Department of Anesthesia as a distinguished academic and research center at both the local and global levels, contributing to the advancement of the field of anesthesia and providing high-quality healthcare services.

### **2. Program Mission**

Providing a technologically advanced educational and research environment that fosters learning and creativity, contributing to the preparation of highly skilled graduates, achieving effective local and international academic collaboration, and strengthening partnerships with various community sectors.

### **3. Program Objectives**

- 1– Providing high-quality education in the field of anesthesia through a well-developed academic environment.
- 2– Establishing advanced laboratories that enable practical training using the latest medical technologies.
- 3– Promoting scientific research and innovation in anesthesia and related specialties.
- 4– Strengthening collaboration with healthcare institutions and research centers locally and internationally.
- 5– Preparing graduates capable of meeting the demands of the job market and contributing to the improvement of healthcare services.
- 6– Creating a virtual operating room that simulates those in educational hospitals.

7– Utilizing artificial intelligence technologies to enhance students' skills.

#### 4. Program Accreditation

The curriculum titles for the first course are prepared centrally and sent through the Deanship of the College of Health and Medical Technologies – Al-Ayen University, Iraq.

#### 5. Other external influences

Summer training (hospitals) - Library - Internet

#### 6. Program Structure

| Program Structure        | Number of Courses | Credit hours | Percentage | Reviews* |
|--------------------------|-------------------|--------------|------------|----------|
| Institution Requirements |                   |              |            |          |
| College Requirements     |                   |              |            |          |
| Department Requirements  |                   |              |            |          |
| Summer Training          |                   |              |            |          |
| Other                    |                   |              |            |          |

\* This can include notes whether the course is basic or optional.

#### 7. Program Description

| Year/Level           | Course Code | Course Name  | Credit Hours |                              |
|----------------------|-------------|--------------|--------------|------------------------------|
| 3 <sup>rd</sup> year | MTAN3101    | Anesthesia 1 | 120 hrs.     | 45 theoretical +75 practical |
|                      |             |              |              |                              |

## 8. Expected learning outcomes of the program

### Knowledge

#### Learning Outcomes A

A-1: Understanding the principles and applications of anesthesia and the techniques used in healthcare, including physiological and pharmacological foundations.

A-2: Comprehensive knowledge of types of anesthesia, preparation methods, and appropriate application for each surgical or medical case.

A-3: Awareness of medical emergency procedures and the ability to identify patients' immediate needs in emergency situations.

A-4: Familiarity with ethical and legal standards related to the practice of anesthesia and patient care.

### Skills

#### Learning Outcomes B

B-1: The ability to perform accurate clinical assessments of patients before, during, and after surgical procedures to ensure safe and effective anesthesia.

B-2: Advanced technical skills in the use and maintenance of anesthesia equipment and patient monitoring.

B-3: The ability to communicate effectively with the healthcare team to ensure coordination and comprehensive patient care.

B-4: Analytical skills to evaluate clinical data and make appropriate therapeutic decisions under pressure.

### Ethics

#### Learning Outcomes C

C-1- A deep commitment to ethical standards in dealing with patients, focusing on humane care and respecting the dignity of the patient.

C-2- Respect for cultural and individual diversity and appreciation of diverse interactions within the healthcare environment.

C-3- Developing a spirit of teamwork and leadership in the workplace, encouraging collaborative work and knowledge exchange.

C-4- A determination for continuous learning and knowledge updating to keep up with scientific and technological advancements in the field of anesthesia.

## 9. Teaching and Learning Strategies

- 1– Brainstorming strategy and learning through modeling.
- 2– Teamwork strategy or collaborative learning or discussion.
- 3– Project–based strategy for problem–solving or problem–based learning.
- 4– Storytelling strategy and blending different strategies.

## 10. Evaluation methods

- 1– Weekly, monthly, and daily exams.
- 2– Writing reports and research and presenting them.
- 3– Scientific discussions.
- 4– Attendance and daily activities.
- 5– Practical assessment.
- 6– Oral exam.

## 11. Faculty

### Faculty Members

| Academic Rank | Specialization |         | Special Requirements/Skills (if applicable) |  | Number of the teaching staff |          |
|---------------|----------------|---------|---------------------------------------------|--|------------------------------|----------|
|               | General        | Special |                                             |  | Staff                        | Lecturer |
|               |                |         |                                             |  |                              |          |

## Professional Development

### Mentoring new faculty members

- 1–Guidance Programs:** Assigning a mentor to each new faculty member to help them adapt to the work environment and teaching practices at the university.
- 2–Orientation Sessions:** Organizing regular sessions that cover the fundamentals of teaching,

classroom management, and assessment strategies.

**3–Workshops to Introduce Resources:** Providing information about available educational resources, including educational technology, libraries, and research centers.

#### **Professional development of faculty members**

**1–Workshops and Training Courses:** Offering specialized training courses in the latest technologies and innovations in anesthesia and healthcare.

**2–Conferences and Seminars:** Encouraging attendance and participation in national and international conferences to exchange experiences and stay updated on new developments.

**3–Scientific Research:** Supporting faculty members in conducting scientific research, publishing research papers, and participating in collaborative research projects.

**4–Performance Evaluation and Feedback:** Implementing a system for periodic evaluation of faculty performance and providing constructive feedback to improve their teaching skills.

**5–E-Learning Platforms:** Using technology to provide continuous educational resources and online training courses.

**6–Digital Collaboration Tools:** Encouraging the use of digital tools to enhance communication among faculty members and facilitate collaboration in research and educational projects.

## **12. Acceptance Criterion**

### **1. Academic Requirements:**

- **Secondary School Certificate:** Applicants must possess a secondary school certificate (preparatory level).
- **Grades:** Applicants must have a certain GPA in secondary school (70 or above for daytime studies, 65–69.9 for evening studies).

### **2. Entrance Exams:**

- **Knowledge Test:** A knowledge test may be administered to assess basic knowledge in biology and chemistry to evaluate the academic preparedness of students.
- **Language Test:** If the program's language is not the applicant's first language, they may be required to take a language test to assess their language skills.

### **3. Personal and Professional Requirements:**

- **Personal Interview:** Interviews will be conducted to evaluate motivations, interest in the field of anesthesia, and the ability to handle the pressures of the profession.

- **Physical and Mental Health:** Given the nature of the work, applicants may be required to undergo medical examinations to ensure their ability to withstand the physical and psychological demands of the anesthesia field.

#### **4. Additional Requirements:**

- **Recommendations:** Applicants must provide recommendation letters from teachers or professionals who have worked with the student and can provide insight into their abilities and professional ethics.
- **Extracurricular and Volunteer Activities:** Experience in voluntary or service-related activities in the healthcare field may be considered as an indicator of the applicant's commitment and interest in healthcare.

### **13. The most important sources of information about the program**

**1. The official website of the college or university:** Colleges and universities provide a special section on their official websites that contains:

- Description of the study program.
- Curricula and academic plan.
- Admission and registration requirements.
- Job opportunities after graduation.

Example: Visit the website of the Ministry of Higher Education or the website of the technical university that offers the program.

#### **2. Academic guides**

Academic guides published by colleges, such as the student guide, which contain comprehensive information about the program, objectives, and study plans.

Department Professors

Communicating with program professors or teaching staff is a valuable resource for understanding the nature of the study, its requirements, and its future prospects.

#### **4. Program Students and Graduates**

Current students or graduates can share their personal experience about the program, its difficulties, and the best ways to succeed in it.

#### **5. Scientific articles and research**

View research and articles related to anesthesia techniques published in:

Medical journals.

Academic databases such as PubMed, Elsevier, Springer.

#### **6. Specialized books and references**

Scientific books on anesthesia techniques, including topics such as:

Basics of anesthesia.

Use of devices and technology in anesthesia.

Critical case management.

#### **7. Conferences and workshops**

Attend medical conferences or workshops that address the latest developments in the field of anesthesia techniques.

### **14. Program Development Plan**

#### **Curriculum Development**

- **Updating Academic Content:**

- Introduce new courses covering advanced anesthesia techniques, such as smart anesthesia and image-guided anesthesia.
- Add specialized courses in emerging fields, such as pediatric and geriatric anesthesia techniques.

- **Aligning with Global Standards:**

- Benchmark the curriculum against similar international programs and ensure compliance with global accreditation standards.

- **Enhancing Practical Training:**

- Increase the number of hours dedicated to hands-on training in hospitals

## **2. Upgrading Infrastructure**

- **Modern Laboratories:**

- Equip simulation labs with advanced anesthesia systems to train students for real-world scenarios.

- **Advanced Equipment:**

- Provide state-of-the-art devices, such as automated anesthesia machines, patient monitoring systems, and mechanical ventilators.
- 

## **3. Strengthening Practical and Clinical Training**

- **Partnerships with Hospitals:**

- Establish agreements with leading hospitals and medical centers to offer students extensive field training opportunities.

- **Advanced Training Programs:**

- Provide specialized training opportunities locally and internationally, such as regional anesthesia and advanced surgical anesthesia.
- 

## **4. Faculty Development**

- **Skill Enhancement for Instructors:**

- Offer training workshops for faculty members on the latest techniques and teaching methodologies.
  - Recruit professionals and practitioners in the field of anesthesia to enrich the teaching experience and bring practical expertise.
- 

## **5. Advancing Scientific Research**

- **Encouraging Student Research:**

- Motivate students to conduct research on anesthesia techniques and present their findings at scientific conferences.

## **6. Developing Students' Professional and Soft Skills**

- **Soft Skills Training:**

- Conduct workshops on communication skills for interacting with medical teams and patients.

- **Safety and Quality Principles:**

- Promote a culture of patient safety and risk management during surgeries.
- 

## **7. Enhancing Employment Opportunities for Graduates**

- **Graduate Follow-Up Office:**

- Support graduates in securing job opportunities through partnerships with hospitals and healthcare facilities.

- **Career Fairs:**

- Organize career fairs to connect students with employers in the healthcare sector.
- 

## **8. Integrating Technology in Education**

- **E-Learning Platforms:**

- Implement e-learning systems and virtual simulation tools for teaching theoretical and practical



COURSES.

### **9. Community Engagement**

- **Raising Awareness of Anesthesia Technologists' Role:**
  - Organize seminars and awareness campaigns to highlight the importance of the anesthesia technologist profession.
- **Continuous Education Programs:**
  - Offer continuing education programs for professionals to update their skills and knowledge.

| Program Skills Outline |             |              |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|------------------------|-------------|--------------|-------------------|------------------------------------|----|----|----|--------|----|----|----|--------|----|----|----|
|                        |             |              |                   | Required program Learning outcomes |    |    |    |        |    |    |    |        |    |    |    |
| Year/Level             | Course Code | Course Name  | Basic or optional | Knowledge                          |    |    |    | Skills |    |    |    | Ethics |    |    |    |
|                        |             |              |                   | A1                                 | A2 | A3 | A4 | B1     | B2 | B3 | B4 | C1     | C2 | C3 | C4 |
| 3 <sup>rd</sup> year   | MTAN3101    | Anesthesia 1 | Basic             | √                                  | √  | √  |    | √      | √  | √  |    | √      | √  | √  |    |
|                        |             |              |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                        |             |              |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
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|                        |             |              |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |

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

## Course Description Form

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| Anesthesia2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| 2. Course Code:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| MTAN3101                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| 3. Semester / Year: 2 <sup>nd</sup> semester                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| 2 <sup>nd</sup> Semester                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| 4. Description Preparation Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
| 16/01/2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 5. Available Attendance Forms:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
| Delivering theoretical lectures in person with laboratory training                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| 6. Number of Credit Hours (Total) / Number of Units (Total)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| 120 hours (45 hrs. theory + 75 hrs. practical)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
| 7. Course administrator's name (mention all, if more than one name)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
| Name: Lecturer Dr. Majid Fakhir Mutar Alhamaidah<br>Email: majid.mutar@alayen.edu.iq                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 8. Course Objectives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| <p><b>General Objective:</b><br/>To familiarize the student with anesthetic agents and equipment used, as well as to prepare the patient before the procedure, monitor them during the procedure, and provide care during the recovery phase.</p> <p><b>Specific Objective:</b><br/>By the end of the year, the student should be capable of the following:</p> <ol style="list-style-type: none"> <li>1. Identifying the different types of anesthetic agents.</li> <li>2. Administering the required anesthetic doses.</li> <li>3. Providing care to the patient based on the nature of the procedure.</li> <li>4. Monitoring the patient during the procedure and during recovery.</li> </ol> |  |
| 9. Teaching and Learning Strategies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |

|                 |                                                                                                                                                                                                                                                                  |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategy</b> | 1.Brainstorming strategy and learning through modeling.<br>2.Teamwork strategy or collaborative learning or discussion.<br>3.Project-based strategy for problem-solving or problem-based learning.<br>4.Storytelling strategy and blending different strategies. |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 10. Course Structure

| Week  | Hours | Required Learning Outcomes                   | Unit or subject name                                | Learning method                    | Evaluation method                    |
|-------|-------|----------------------------------------------|-----------------------------------------------------|------------------------------------|--------------------------------------|
| 1+2   | 16    | Understanding and Comprehending the Lecture  | Regional Anesthesia (spinal, epidural, nerve block) | Lecture + Discussion / Laboratory. | Quiz + Direct Question + Attendance. |
| 3+4   | 16    | Understanding and Comprehending the Lecture. | Renal Disease and Anesthesia                        | Lecture Discussion Laboratory.     | Quiz + Direct Question + Attendance. |
| 5+6   | 16    | Understanding and Comprehending the Lecture  | Liver Disease Anesthesia                            | Lecture Discussion Laboratory.     | Quiz + Direct Question + Attendance. |
| 7+8   | 16    | Understanding and Comprehending the Lecture  | Anesthesia for orthopedic surgery                   | Lecture Discussion Laboratory.     | Quiz + Direct Question + Attendance. |
| 9+10  | 16    | Understanding and Comprehending the Lecture  | Anesthesia for Laparoscopic Surgery                 | Lecture Discussion Laboratory.     | Quiz + Direct Question + Attendance. |
| 11+12 | 16    | Understanding and Comprehending the Lecture  | Anesthesia for ophthalmic surgery                   | Lecture Discussion Laboratory.     | Quiz + Direct Question + Attendance. |
| 13    | 8     | Understanding and Comprehending the Lecture  | Anesthesia for case surgery                         | Lecture Discussion Laboratory.     | Quiz + Direct Question + Attendance. |
| 14    | 8     | Understanding and Comprehending the Lecture  | Non-Operating Room Anesthesia (NORA)                | Lecture Discussion Laboratory.     | Quiz + Direct Question + Attendance. |
| 15    | 8     | Understanding and Comprehending the Lecture  | Common Perioperative Complication management        | Lecture Discussion Laboratory.     | Quiz + Direct Question + Attendance. |

## 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.

|                   |            |           |              |           |            |       |
|-------------------|------------|-----------|--------------|-----------|------------|-------|
| Daily Preparation | Daily Exam | Oral Exam | Monthly Exam | Practical | Final Exam | Total |
| 5                 | 5          | 5         | 10           | 15        | 60         | 100   |

## 12. Learning and Teaching Resources

|                                               |                                                                                                                                                                                                  |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Required textbooks (curricular books, if any) | 1.Clinical anesthesiology ----- Morgan and Mikhail----6th edition<br>2. Anesthesia for medical students----Ost and Bryce--Smith<br>3. Clinical anesthesiology----4th edition--Appleton and Lange |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                    |                                        |
|--------------------------------------------------------------------|----------------------------------------|
| Main references (sources)                                          | British Journal of Anesthesiology      |
| Recommended books and references (scientific journals, reports...) | American Society of Anesthesiologists  |
| Electronic References, Websites                                    | Pub med, Google scholar, Research Gate |

**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 Al-Ayen Iraqi University**

**2024**

## **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 its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

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:

**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 (quarterly, annual, Bologna Process) 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.



## Academic Program Description Form

**University Name:** ALAyen Iraqi National University

**Faculty/Institute:** College of Health and Medical Technologies

**Scientific Department:** . Dept. of Anesthesia techniques

**Academic or Professional Program Name:** College of Health and Medical Technologies/Department of Anesthesia Technologies

**Final Certificate Name:** Bachelor of Anesthesia Techniques

**Academic System:** annual

**Description Preparation Date:**

**File Completion Date:**

**Signature:**

**Head of Department Name:**

**Date:**

**Signature:**

**Scientific Associate Name:**

**Date:**

**The file is checked by:**

**Department of Quality Assurance and University Performance**

**Director of the Quality Assurance and University Performance Department:**

**Date:**

**Signature:**

**Approval of the Dean**

### **1. Program Vision**

The Department of Anesthesia will be a distinguished academic and research center at the local and international levels, contributing to the development of the field of anesthesia and providing quality health services.

### **2. Program Mission**

Preparing specialized cadres in the field of anesthesia capable of providing distinguished medical services, and promoting scientific research to develop medical technologies in a way that contributes to serving society and achieving sustainable development.

### **3. Program Objectives**

1. Providing high-quality education in the field of anesthesia through an advanced academic environment.
2. Establishing advanced laboratories that allow practical training according to the latest medical technologies.
3. Encouraging scientific research and creativity in the field of anesthesia and related specialties.
4. Enhancing cooperation with health institutions and research centers locally and internationally.
5. Qualifying graduates capable of meeting the needs of the labor market and contributing to improving health care.
6. Establishing a virtual operating room that simulates what is found in teaching hospitals
7. Utilizing artificial intelligence technologies to develop students' skills

|  |
|--|
|  |
|--|

#### 4. Program Accreditation

Under preparation

#### 5. Other external influences

|  |
|--|
|  |
|--|

#### 6. Program Structure

| Program Structure        | Number of Courses | Credit hours | Percentage | Reviews* |
|--------------------------|-------------------|--------------|------------|----------|
| Institution Requirements |                   |              |            |          |
| College Requirements     |                   |              |            |          |
| Department Requirements  |                   |              |            |          |
| Summer Training          |                   |              |            |          |
| Other                    |                   |              |            |          |

\* This can include notes whether the course is basic or optional.

#### 7. Program Description

| Year/Level | Course Code | Course Name | Credit Hours |  |
|------------|-------------|-------------|--------------|--|
|            |             |             |              |  |
|            |             |             |              |  |

#### 8. Expected learning outcomes of the program

##### A.Knowledge

|                   |                                                                                                         |
|-------------------|---------------------------------------------------------------------------------------------------------|
| Learning Outcomes | 1.Understanding human anatomy, organ functions, and pathophysiology related to anesthesia procedures. 1 |
|-------------------|---------------------------------------------------------------------------------------------------------|

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <p>2. Knowing the basic principles of the effect of anesthetic and analgesic drugs on different body systems. 2</p> <p>3. Describe the the types and objectives of anesthesia methods (general, local, and regional) and choosing the appropriate method for each case.</p> <p>4. Knowing the principles of safety during anesthesia, including the management of complications and understanding international and local protocols in the field of anesthesia.</p>                                                                                       |
| <b>B.Skills</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Learning Outcomes | <p>1.The ability to assess the health status of patients before surgery, including collecting medical history and conducting necessary examinations.</p> <p>2.Skills to insert devices such as breathing tubes and intravenous catheters accurately and safely.</p> <p>3.Monitoring the patient's vital functions during and after the operation, and using modern medical devices.</p> <p>4. Preparing and injecting anesthetic drugs and controlling appropriate doses according to the case and identifying and managing side effects efficiently.</p> |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>C.Ethics</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Learning Outcomes | <p>1.Commitment to the highest standards of quality in providing medical care.</p> <p>2.Interact with modern developments in the field of anesthesia and healthcare technologies.</p> <p>3.Act with integrity and honesty in all medical practices.</p> <p>4.Commitment to updating knowledge and skills through participation in training courses and scientific conferences</p>                                                                                                                                                                         |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| <b>9. Teaching and Learning Strategies</b>                                                       |
| <b>Blended learning</b>                                                                          |
| <ul style="list-style-type: none"> <li>• Lectures (Interactive)</li> </ul>                       |
| <b>Online Lectures (Interactive)</b>                                                             |
| <b>Tutorial</b>                                                                                  |
| <b>Role play</b>                                                                                 |
| <b>Computer-based learning (computers e-learning, free downloadable software usage, Webinar)</b> |
| <b>Team-based learning (group dissuasion, presentation)</b>                                      |
| <b>Discussion</b>                                                                                |
| <b>Case study</b>                                                                                |
| <b>Problem solving</b>                                                                           |

## 10. Evaluation methods

Midterm and final exam  
Evaluations

## 11. Faculty

### Faculty Members

| Academic Rank                                  | Specialization                 |         | Special Requirements/Skills (if applicable) |  | Number of the teaching staff |          |
|------------------------------------------------|--------------------------------|---------|---------------------------------------------|--|------------------------------|----------|
|                                                | General                        | Special |                                             |  | Staff                        | Lecturer |
| Assistant <b>Lecturer</b><br>Amjad abbas Ogaib | Medical<br>surgical<br>nursing | Surgery |                                             |  |                              |          |

## Professional Development

### Mentoring new faculty members

### Professional development of faculty members

1. Participation in training courses held within the college.
2. Participation in professional courses held within the college within the prescribed curricula, as well as professional education courses
3. There are specific units within the personal development programme that give students the opportunity and encourage them to engage in professionally relevant qualifications that allow students to reflect on their professional development.

## 12. Acceptance Criterion

This is done according to the acceptance rate in the medical group (College of Medical and Health Technologies)

### **13. The most important sources of information about the program**

**1. The official website of the college or university:** Colleges and universities provide a special section on their official websites that contains:

- Description of the study program.
- Curricula and academic plan.
- Admission and registration requirements.
- Job opportunities after graduation.

Example: Visit the website of the Ministry of Higher Education or the website of the technical university that offers the program.

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#### **4. Program Students and Graduates**

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#### **5. Scientific articles and research**

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Basics of anesthesia.

Use of devices and technology in anesthesia.

Critical case management.

## **7. Conferences and workshops**

Attend medical conferences or workshops that address the latest developments in the field of anesthesia techniques.

## **14. Program Development Plan**

### **1. Curriculum Development**

- **Updating Academic Content:**

- Introduce new courses covering advanced anesthesia techniques, such as smart anesthesia and image-guided anesthesia.
- Add specialized courses in emerging fields, such as pediatric and geriatric anesthesia techniques.

- **Aligning with Global Standards:**

- Benchmark the curriculum against similar international programs and ensure compliance with global accreditation standards.

- **Enhancing Practical Training:**

- Increase the number of hours dedicated to hands-on training in hospitals

### **2. Upgrading Infrastructure**

- **Modern Laboratories:**

- Equip simulation labs with advanced anesthesia systems to train students for real-world scenarios.

- **Advanced Equipment:**

- Provide state-of-the-art devices, such as automated anesthesia machines, patient monitoring systems, and mechanical ventilators.

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### **3. Strengthening Practical and Clinical Training**

- **Partnerships with Hospitals:**

- Establish agreements with leading hospitals and medical centers to offer students extensive field training opportunities.

- **Advanced Training Programs:**

- Provide specialized training opportunities locally and internationally, such as regional anesthesia and advanced surgical anesthesia.

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#### **4. Faculty Development**

- **Skill Enhancement for Instructors:**

- Offer training workshops for faculty members on the latest techniques and teaching methodologies.
- Recruit professionals and practitioners in the field of anesthesia to enrich the teaching experience and bring practical expertise.

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#### **5. Advancing Scientific Research**

- **Encouraging Student Research:**

- Motivate students to conduct research on anesthesia techniques and present their findings at scientific conferences.

#### **6. Developing Students' Professional and Soft Skills**

- **Soft Skills Training:**

- Conduct workshops on communication skills for interacting with medical teams and patients.

- **Safety and Quality Principles:**

- Promote a culture of patient safety and risk management during surgeries.

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#### **7. Enhancing Employment Opportunities for Graduates**

- **Graduate Follow-Up Office:**

- Support graduates in securing job opportunities through partnerships with hospitals and healthcare facilities.

- **Career Fairs:**

- Organize career fairs to connect students with employers in the healthcare sector.

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#### **8. Integrating Technology in Education**

- **E-Learning Platforms:**

- Implement e-learning systems and virtual simulation tools for teaching theoretical and practical courses.

#### **9. Community Engagement**

- **Raising Awareness of Anesthesia Technologists' Role:**

- Organize seminars and awareness campaigns to highlight the importance of the anesthesia technologist profession.

- **Continuous Education Programs:**

- Offer continuing education programs for professionals to update their skills and knowledge.



| Program Skills Outline   |             |             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|--------------------------|-------------|-------------|-------------------|------------------------------------|----|----|----|--------|----|----|----|--------|----|----|----|
|                          |             |             |                   | Required program Learning outcomes |    |    |    |        |    |    |    |        |    |    |    |
| Year/Level               | Course Code | Course Name | Basic or optional | Knowledge                          |    |    |    | Skills |    |    |    | Ethics |    |    |    |
|                          |             |             |                   | A1                                 | A2 | A3 | A4 | B1     | B2 | B3 | B4 | C1     | C2 | C3 | C4 |
| Level three<br>MTAN 3205 | MTAN 3205   | Surgery     | basic             | √                                  |    |    |    |        |    |    |    | √      |    | √  |    |
|                          |             |             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                          |             |             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                          |             |             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                          |             |             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                          |             |             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                          |             |             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |
|                          |             |             |                   |                                    |    |    |    |        |    |    |    |        |    |    |    |

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

## Course Description Form

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                  |
| surgery (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                  |
| 2. Course Code:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                  |
| (1)MTAN3205                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                  |
| 3. Semester / Year: Semester                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                  |
| Semester / second course / stage three                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                  |
| 4. Description Preparation Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                  |
| 30/4/2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                  |
| 5. Available Attendance Forms:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                  |
| Full-time and official attendance hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                  |
| 6. Number of Credit Hours (Total) / Number of Units (Total)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                  |
| Lecture: 2 , Practical: 2 , Total: 4 (2+2 )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                  |
| 7. Course administrator's name (mention all, if more than one name)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                  |
| Name: Ass. Lec. Amjad Abbas Ogaib<br>Email: amjad141981@gmail.com                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                  |
| 8. Course Objectives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                  |
| <p>General objectives:</p> <p>To familiarize the student with the different organs of the body and the impact of injuries and diseases on them from an anatomical and physiological perspective, to familiarize the student with the different organs of the body and the impact of injuries and diseases and the signs of these cases and the basic frameworks and consequences (complications) resulting from them. Also, to teach the student how to deal with them.</p> <p>Special objectives:</p> <p>To familiarize the student with the cases that require intervention and clarify the nature of this intervention (as they may encounter during the work in operations and intensive care) with a focus on emergency cases. At this stage, the digestive, urinary, respiratory, vascular (cardiac) systems are studied.</p> |                                                                                                  |
| 9. Teaching and Learning Strategies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                  |
| <b>Strategy</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Blended learning</b> <ul style="list-style-type: none"> <li>Lectures (Interactive)</li> </ul> |

|  |                                                                                                                                                            |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Online Lectures (Interactive)</p> <p>Role play</p> <p>Team-based learning (group discussion, presentation)</p> <p>Discussion</p> <p>Problem solving</p> |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 10. Course Structure

| Week | Hours | Required Learning Outcomes | Unit or subject name                                      | Learning method                                                                                                                                                              | Evaluation method                                   |
|------|-------|----------------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| 1    | 2     | A 1<br>C1/ C3              | Trauma to the : K kidneys ,<br>Ureter , Bladder , Urethra | <p>Lectures (Interactive)</p> <p>Online</p> <p>Lectures (Interactive)</p> <p>Role play</p> <p>Team-based learning presentation)</p> <p>Discussion</p> <p>Problem solving</p> | <p>Midterm exams</p> <p>Final exams evaluations</p> |
| 2    | 2     | A 1<br>C1/ C3              | Hydronephrosis , Urinary stone , U                        | <p>Lectures (Interactive)</p> <p>OnlineLectures (Interactive)</p> <p>Role play</p> <p>Team-based learning presentation)</p> <p>Discussion</p> <p>Problem solving</p>         | <p>Midterm exams</p> <p>Final exams evaluations</p> |
| 3    | 2     | A 1<br>C1/ C3              | DVT & pulmonary embolism                                  | <p>Lectures (Interactive)</p> <p>OnlineLectures (Interactive)</p> <p>Role play</p> <p>Team-based learning presentation)</p> <p>Discussion</p> <p>Problem solving</p>         | <p>Midterm exams</p> <p>Final exams evaluations</p> |

|   |   |               |                                                                                  |                                                                                                                                                 |                                             |
|---|---|---------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| 4 | 2 | A 1<br>C1/ C3 | <b>Bariatric surgery</b>                                                         | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 5 | 2 | A 1<br>C1/ C3 | <b>Gynecology ( hysterectomy<br/>caesarean section )</b>                         | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 6 | 2 | A 1<br>C1/ C3 | <b>Urogenital Tract in Males<br/>Prostate , Testis , Penis</b>                   | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 7 | 2 | A 1<br>C1/ C3 | <b>Thorax surgery :<br/>Respiratory path physiology<br/>&amp; General review</b> | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 8 | 2 | A 1<br>C1/ C3 | <b>Trauma to thorax : Rib<br/>Fractures, Flail Chest</b>                         | Lectures (Interactive)<br>OnlineLectures                                                                                                        | Midterm exams<br>Final exams                |

|    |   |               |                                             |                                                                                                                                                 |                                             |
|----|---|---------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|    |   |               |                                             | (Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving                                             | evaluations                                 |
| 9  | 2 | A 1<br>C1/ C3 | Pneumothorax ,<br>Haemothorax               | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 10 | 2 | A 1<br>C1/ C3 | Pleural Effusion , Empyema                  | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 11 | 2 | A 1<br>C1/ C3 | Chest tube :<br>Application &<br>Management | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 12 | 2 | A 1<br>C1/ C3 | Pediatric surgery                           | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play                                                                          | Midterm exams<br>Final exams<br>evaluations |

|    |   |               |                                                 |                                                                                                                                                 |                                             |
|----|---|---------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|    |   |               |                                                 | Team-based learning<br>presentation)<br>Discussion<br>Problem solving                                                                           |                                             |
| 13 | 2 | A 1<br>C1/ C3 | Types of Thoracic<br>operations                 | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 14 | 2 | A 1<br>C1/ C3 | Osteomyelitis                                   | Lectures (Interactive)<br>OnlineLectures<br>(Interactive)<br>Role play<br>Team-based learning<br>presentation)<br>Discussion<br>Problem solving | Midterm exams<br>Final exams<br>evaluations |
| 15 | 2 | A 1<br>C1/ C3 | Orthopedic surgery, fracture<br>and dislocation |                                                                                                                                                 |                                             |

### 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 Resources

|                                                                       |                                                                                                                                                                                |
|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Required textbooks (curricular books, if any)                         | Non                                                                                                                                                                            |
| Main references (sources)                                             | <b>Oxford hand book of clinical surgery, sixth edition,<br/>bailey and love 28<sup>th</sup> Edition 2022</b><br><b>Harrisons principle of internal medicine 2th edition 20</b> |
| Recommended books and references (scientific<br>journals, reports...) | <b>Davidson's Principles and<br/>Practice of Medicine</b>                                                                                                                      |
| Electronic References, Websites                                       | University educational platform                                                                                                                                                |



**Republic of Iraq  
Ministry of Higher  
Education  
& Scientific Research  
Al-Ayen Iraqi University  
College of Health and Medical  
Technologies**



**Al-Ayen Iraqi University  
College of Health and Medical  
Technologies  
department of Anesthesia  
Technologies  
Quality Assurance Unit  
Course Description**

**Course Description Form**



|                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Second course                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2. Course Code:                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| MTAN3103                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3. Semester / Year:                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2024-2025                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4. Description Preparation Date:                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 20\3\2025                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 5. Available Attendance Forms:                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Attendance lectures                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 6. Number of Credit Hours (Total) / Number of Units (Total)                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4 hours (2 hours theoretical / 2 hours practical ) / 8 units                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 7. Course administrator's name (mention all, if more than one name)                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Name: Mushtaq twayess abdulhussein<br>Email: mushtaqtwayess2@gmail.com                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 8. Course Objectives                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Course Objectives:</b><br><b>Identify all anesthesia machines and the intensive care unit</b><br><b>And the unity of awakening.</b><br><b>Knowledge of operating and working on devices.</b> | 1. Use all different selection devices.<br>2. Maintenance and maintenance of cooling devices.<br>3. Introduction to all parts of the device<br><b>Medical techniques used in anesthesia.</b>                                                                                                                                                                                                                                                                                     |
| 9. Teaching and Learning Strategies                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Strategy                                                                                                                                                                                        | Active learning:<br>Group discussions: Encouraging students to participate interactive discussions on academic topics, which enhance critical thinking and expression of opinions<br><br>Project-based education:<br>Group projects: Assigning students to projects that require research and cooperation, such as preparing reports giving presentations.<br><br>Individual projects: Encouraging students to conduct independent research on topics of interest to them, which |

enhances writing skills about their specializations

## 10. Course Structure

| Week | Hours                                 | Required Learning Outcomes                                 | Unit or subject name                            | Learning method                    | Evaluation method                                                         |
|------|---------------------------------------|------------------------------------------------------------|-------------------------------------------------|------------------------------------|---------------------------------------------------------------------------|
| 1    | 2 hours theoretical&4 hours practical | Explaining the mechanical respiratory system to students   | Modification of breathing system                | Theoretical and practical lectures | Exam in the last 10 minutes                                               |
| 2    | 2 hours theoretical&4 hours practical | Explain the types of respiratory system                    | ( lack , bain and Humphrey)                     | Theoretical and practical lectures | Explanation of reports by students                                        |
| 3    | 2 hours theoretical&4 hours practical | How to work on the closed system in the respiratory system | circle breathing and soda lime                  | Theoretical and practical lectures | Brainstorming questions at the end of the lecture                         |
| 4&5  | 4 hours theoretical&8 hours practical | How to adjust the device?                                  | procedure for checking breathing system         | Theoretical and practical lectures | Distributing students into groups and applying the application to devices |
| 6    | 2 hours theoretical&4 hours           | What is an artificial respirator?                          | Anesthesia ventilator, principle of working and | Theoretical and practical          | viva voce                                                                 |

|                  | <b>practical</b>                                 |                                                                    | <b>type of ventilator</b>                                                     | <b>lectures</b>                           |                                                                                              |
|------------------|--------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>7</b>         | <b>2 hours theoretical&amp;4 hours practical</b> | <b>Types of artificial respirator</b>                              | <b>Types of ventilator</b>                                                    | <b>Theoretical and practical lectures</b> | <b>Working on operating the devices</b>                                                      |
| <b>8</b>         | <b>2 hours theoretical&amp;4 hours practical</b> | <b>How to operate an MP3 system</b>                                | <b>manley MP3</b>                                                             | <b>Theoretical and practical lectures</b> | <b>Exam in the last 10 minutes</b>                                                           |
| <b>9&amp;10</b>  | <b>4 hours theoretical&amp;8 hours practical</b> | <b>How to operate the Penlon system</b>                            | <b>penlon ventilator and high-frequency jet ventilator</b>                    | <b>Theoretical and practical lectures</b> | <b>We ask oral questions</b>                                                                 |
| <b>11</b>        | <b>2 hours theoretical&amp;4 hours practical</b> |                                                                    | <b>Equipment for local analgesia: spinal, epidural, and major nerve block</b> | <b>Theoretical and practical lectures</b> | <b>Dialogue questions during the lecture</b><br><b>Dialogue questions during the lecture</b> |
| <b>12&amp;13</b> | <b>4 hours theoretical&amp;8 hours practical</b> | <b>Explaining what equipment is required for spinal anesthesia</b> | <b>peripheral nerve stimulator and nerve block stimulator</b>                 | <b>Theoretical and practical lectures</b> | <b>direct questions</b>                                                                      |
| <b>14</b>        | <b>2 hours theoretical&amp;4 hours practical</b> | <b>Explanation of the electric shock device</b>                    | <b>Defibrillator and pacemaker</b>                                            | <b>Theoretical and practical lectures</b> | <b>Oral questions</b>                                                                        |
| <b>15</b>        | <b>2 hours theoretical&amp;4 hours</b>           | <b>Explain what a regional anesthesia</b>                          | <b>Blood warmer</b>                                                           | <b>Theoretical and practical</b>          | <b>Asking students some</b>                                                                  |

|                                                                                                                                                                     |                  |                |                                                                                                                                                                               |                 |                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------------------------------|
|                                                                                                                                                                     | <b>practical</b> | <b>devices</b> |                                                                                                                                                                               | <b>lectures</b> | <b>questions<br/>about the<br/>lectures</b> |
| <b>11. Course Evaluation</b>                                                                                                                                        |                  |                |                                                                                                                                                                               |                 |                                             |
| 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 |                  |                |                                                                                                                                                                               |                 |                                             |
| <b>Mid 40 (25 theoretical &amp; 10 practical &amp; 5 attendance and daily exams)</b>                                                                                |                  |                |                                                                                                                                                                               |                 |                                             |
| <b>Final 60 (35 theoretical &amp; 25 practical)</b>                                                                                                                 |                  |                |                                                                                                                                                                               |                 |                                             |
| <b>12. Learning and Teaching Resources</b>                                                                                                                          |                  |                |                                                                                                                                                                               |                 |                                             |
| Required textbooks (curricular books, if any)                                                                                                                       |                  |                | Anesthesia equipment, principle and application<br>Jan Ehrenwerth, MD, 2nd edition 2. The Manual<br>Textbook of Anesthetic Equipment, Warren<br>Sandberg, MD, PhD 2nd edition |                 |                                             |
| Main references (sources)                                                                                                                                           |                  |                |                                                                                                                                                                               |                 |                                             |
| Recommended books and references (scientific journals, reports...)                                                                                                  |                  |                | Anesthesia and analgesia                                                                                                                                                      |                 |                                             |
| Electronic References, Websites                                                                                                                                     |                  |                | Google scholar , pumped a<br>web of science                                                                                                                                   |                 |                                             |

## **Academic Program Description Form**

University Name: Al Ayen University of Iraq

Faculty/Institute: Faculty of Health and Medical Technologies

Scientific Department: Department of Anesthesia Techniques

Academic or Vocational Program Name: College of Health and Medical Technologies / Department of Anesthesiology

Final Certificate Name: Bachelor of Anesthesia Techniques

Academic System: Semester

Description Setup Date: 2025

File filling: 2025

**Signature :**

**Scientific Associate Name:**

**Date :**

**Signature :**

**Head of Department**

**Name:**

**Date :**

Check the file before

Division of Quality Assurance and University Performance

Name of the Director of the Quality Assurance and University

Performance Division:

Date

Signature

Approval of the Dean

### **1. Program Vision**

To be a distinguished academic and research center at the local and international levels, contributing to the development of the field of anesthesia and the provision of quality health services

### **2. Program Mission**

Preparing specialized cadres in the field of anesthesia capable of providing distinguished medical services, and promoting scientific research to develop medical technologies in a way that contributes to community service and sustainable development.

### **3. Program Objectives**

1. Provide high-quality education in the field of anesthesia techniques through a sophisticated academic environment.
2. Establishing advanced laboratories that allow practical training according to the latest medical technologies.
3. Encouraging scientific research and creativity in the field of anesthesia and related disciplines.
4. Strengthening cooperation with health institutions and research centers locally and internationally.
5. Qualifying graduates who are able to meet the needs of the labor market and contribute to improving health care.
6. Establishing virtual laboratories that simulate what is in teaching hospitals
7. Utilizing artificial intelligence techniques to develop students' skills

### **4. Program Accreditation**

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

Theoretical study + educational laboratories

| 6. Program Structure |            |               |                   |                                 |
|----------------------|------------|---------------|-------------------|---------------------------------|
| Reviews*             | Percentage | Unit of study | Number of Courses | Program Structure               |
|                      |            |               |                   | Requirements of the institution |
|                      |            |               |                   | College Requirements            |
|                      |            |               |                   | Department Requirements         |
|                      |            |               |                   | Summer Training                 |
|                      |            |               |                   | Other                           |

\* It can include notes whether the course is basic or optional.

| 7. Program Description |  |             |                       |            |
|------------------------|--|-------------|-----------------------|------------|
| Credit Hours           |  | Course Name | Course or Course Code | Year/Level |
|                        |  |             |                       |            |
|                        |  |             |                       |            |

| 8. Expected learning outcomes of the program                                                                                                                                                                                                                                              |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Knowledge</b>                                                                                                                                                                                                                                                                          |  |
| 1- The amount of student comprehension of the material<br>2- The ability to analyze and apply what he learned practically to the calculator<br>3- The evaluation should be carried out through the presentation of the material among students in the laboratory and then applied by them |  |
| <b>Skills</b>                                                                                                                                                                                                                                                                             |  |
|                                                                                                                                                                                                                                                                                           |  |
|                                                                                                                                                                                                                                                                                           |  |

| Values                                                                                                                                                                                                                                                        |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1- Accurate and correct understanding of computer applications and correct knowledge of how to use applications and other medical teaching courses in the second and third educational stages in anesthesia techniques, for which computer is a prerequisite. |  |
| 2- Interaction with recent developments in the field of technology                                                                                                                                                                                            |  |
| 3- Commitment to updating knowledge and skills through participation in training courses and scientific conferences                                                                                                                                           |  |

| 9. Teaching and Learning Strategies                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Blended Learning</li> <li>• Lectures (interactive)</li> <li>• Online lectures (interactive)</li> <li>• Use strategy, cooperative learning, discussion, brainstorming and practical discussion</li> <li>• Problem solving</li> </ul> |

| 10. Evaluation methods                                                  |
|-------------------------------------------------------------------------|
| 1- Midterm and final exams<br>2- Written exams<br>3- Laboratory Reports |

| 11. Faculty                       |  |                                             |  |                |                                 |
|-----------------------------------|--|---------------------------------------------|--|----------------|---------------------------------|
| Faculty Members                   |  |                                             |  |                |                                 |
| Preparation of the teaching staff |  | Special Requirements/Skills (if applicable) |  | Specialization |                                 |
|                                   |  |                                             |  | Academic Rank  |                                 |
|                                   |  |                                             |  |                |                                 |
|                                   |  |                                             |  | Computer       | Eng. Mustafa Abdel Ghani Nasser |



|  |  |  |  |  |                  |  |
|--|--|--|--|--|------------------|--|
|  |  |  |  |  | Engineer<br>ring |  |
|--|--|--|--|--|------------------|--|

|                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Professional Development</b>                                                                                                                                                                                                                            |
| <b>Mentoring new faculty members</b>                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                            |
| <b>Professional development of faculty members</b>                                                                                                                                                                                                         |
| <ol style="list-style-type: none"> <li>1. Participate in training courses held within the college.</li> <li>2. Participate in professional courses held at the college within the prescribed curricula, as well as vocational education courses</li> </ol> |

|                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>12. Acceptance Criterion</b>                                                                                                                                                                                 |
| This is done according to the acceptance rate in the medical group (College of Medical and Health Technologies) within the electronic form approved by the Ministry of Higher Education and Scientific Research |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>13. The most important sources of information about the program</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p>. 1 The official website of the college or university: Colleges and universities provide a special section on their official websites containing:</p> <ul style="list-style-type: none"> <li>• Description of the study program.</li> <li>• Curriculum and academic plan.</li> <li>• Admission and registration requirements.</li> <li>• Employment opportunities after graduation.</li> </ul> <p>Example: Visit the website of the Ministry of Higher Education or the website of the technical university that offers the program.</p> <p>2. Academic Guides<br/>Academic guides published by colleges, such as the Student Handbook, which contain comprehensive information about the program, objectives, and study plans.</p> <p>3. Department Professors</p> |

Communicating with program professors or teaching staff is a valuable source of understanding the nature of the study, its requirements, and future prospects.

4. Students and alumni of the program

Current students or alumni can share their personal experience about the program, its difficulties, and the best ways to succeed in it.

5. Scientific articles and research

Read research and articles related to anesthesia techniques published in:  
Medical journals.

Academic databases such as PubMed, Elsevier, Springer.

6. Specialized books and references

Scientific books on anesthesia techniques, including topics such as:  
Fundamentals of Anesthesia Techniques

The use of devices and technology in anesthesia techniques.

Critical case management.

7. Conferences and workshops

Attend medical conferences or workshops dealing with the latest developments in the field of anesthesia techniques.

## 14. Program Development Plan

### 1. Curriculum development

- **Updating scientific content:**

- Adding new courses covering the latest technologies in anesthesia, such as smart fitting and image-guided installation.

- Include specialized courses in emerging fields, such as age-making techniques for children and the elderly.

- **Alignment with international standards:**

- Compare curricula with similar international programs and ensure their compatibility with international academic accreditation standards.
- **Enhance the practical side:**
  - Increasing the hours allocated for practical training in hospitals .
- 2. Modernization of infrastructure**
  - **Providing modern laboratories:**
    - Equipping simulation laboratories with advanced anesthesia systems to train students in real situations.
  - **Adding new devices and technologies:**
    - Providing devices such as automated anesthesia systems, patient monitors, and mechanical ventilation devices.
- 3. Enhance practical and applied training**
  - **Partnerships with hospitals and medical centers:**
    - Signing cooperation agreements with leading hospitals and medical centers to provide intensive field training opportunities for students.
    -
- 4. Building academic staff**
  - **Developing the skills of the teaching staff:**
    - Providing training courses for educational staff on the latest technologies and teaching methods.
  - **Appointment of new specialists:**
    - Attracting experts and practitioners to teach courses and provide practical experience.
- 5. Improving scientific research**
  - **Student Research Support:**
    - Encourage students to conduct research on anesthesia techniques and present them at scientific conferences.
- 6. Develop students' professional and personal skills**
  - **Soft Skills Education:**
    - Include workshops on communication skills with the medical team and patients.
  - **Teaching safety and quality principles:**
    - Promote a culture of patient safety and risk management during operations.
- 7. Enhance employment opportunities for graduates**
  - **Establishment of the Alumni Follow-up Office:**
    - Supporting graduates for job opportunities through partnerships with hospitals and health centers.
  - **Organizing recruitment events:**
    - Holding career days that bring students together with employers in the health sector.

#### **8. Integrating technology into education**

- **E-Learning:**

- Inclusion of e-learning and virtualization platforms for teaching theoretical and practical courses.

#### **9. Connect with the community**

- **Raising awareness of the role of anesthesia technicians :**

- Organizing seminars and awareness campaigns in the community to explain the importance of specialization in anesthesia techniques.

- **Continuous Training:**

- Provide continuing education programs for practitioners in the field to update their skills.

| Program Skills Outline                      |    |    |    |        |    |    |    |           |    |    |    |                   |                       |             |                     |
|---------------------------------------------|----|----|----|--------|----|----|----|-----------|----|----|----|-------------------|-----------------------|-------------|---------------------|
| Learning outcomes required from the program |    |    |    |        |    |    |    |           |    |    |    |                   |                       |             |                     |
| Values                                      |    |    |    | Skills |    |    |    | Knowledge |    |    |    | Basic or optional | Course Name           | Course Code | Year / Level        |
| C4                                          | C3 | C2 | C1 | B4     | B3 | B2 | B1 | A4        | A3 | A2 | A1 |                   |                       |             |                     |
| √                                           | √  | √  | √  | √      | √  | √  | √  | √         | √  | √  | √  | fundamental       | Computer Applications |             | 2024-2025/Phase III |
|                                             |    |    |    |        |    |    |    |           |    |    |    |                   |                       |             |                     |
|                                             |    |    |    |        |    |    |    |           |    |    |    |                   |                       |             |                     |
|                                             |    |    |    |        |    |    |    |           |    |    |    |                   |                       |             |                     |
|                                             |    |    |    |        |    |    |    |           |    |    |    |                   |                       |             |                     |
|                                             |    |    |    |        |    |    |    |           |    |    |    |                   |                       |             |                     |
|                                             |    |    |    |        |    |    |    |           |    |    |    |                   |                       |             |                     |
|                                             |    |    |    |        |    |    |    |           |    |    |    |                   |                       |             |                     |
|                                             |    |    |    |        |    |    |    |           |    |    |    |                   |                       |             |                     |

●  
the program under evaluation.

Please tick the boxes corresponding to the individual learning outcomes from

## Course Description Form

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course: Computer Applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                     |
| 2. Course Code:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                     |
| 3. Semester / Year First Semester / 2024-2025 / Third Stage                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                     |
| 4. Date of preparation of this description 24/1/2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                     |
| 5. Available attendance forms Physical presence within the university                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                     |
| 6. Number of Credit Hours (Total) / Number of Units (Total)                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                     |
| 4 Hours 1 (Theoretical) 2 (Practical)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                     |
| 7. Course administrator's name (if more than one name)                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                     |
| Name: Eng. Mustafa Abdel Ghani Nasser<br>mustafmustaf952@gmail.com                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                     |
| 8. Course Objectives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                     |
| <p><b>Other skills related to employability and personal development.</b></p> <p>Encourage the student to write simple research towards previous lectures to create a state of balance between methodological information and source information</p> <p>Urging the student to make practical projects on the computer and holding seminars among students about the methodology of the subject</p> <p>Encourage the student to evaluate the answer of fellow students from other students to develop Self-development</p> | <p><b>Course Objectives: The teaching of the course aims to provide students with knowledge about Basic computer in general</b></p> |
| 9. Teaching and Learning Strategies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                     |
| Strategy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                     |

|                      |                    |                      |                               |       |      |
|----------------------|--------------------|----------------------|-------------------------------|-------|------|
|                      |                    |                      |                               |       |      |
| 10. Course Structure |                    |                      |                               |       |      |
| Evaluation<br>method | Learning<br>method | Unit or subject name | Required Learning<br>Outcomes | Hours | Week |



| Evaluation method                | Method of education | Unit / Subject Name                        | Required Learning Outcomes                                                                               | Hours | The week |
|----------------------------------|---------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------|-------|----------|
| <b>&amp; Testing Application</b> | <b>Interactive</b>  | <b>Working with charts</b>                 | <b>Dealing with charts, lines, columns, circular representation of ratios, spread chart and others</b>   | 3     | .1       |
| <b>&amp; Testing Application</b> | <b>Interactive</b>  | <b>Application of statistical packages</b> | <b>Dealing with statistical applications such as cross tables</b>                                        | 3     | .2       |
| <b>&amp; Testing Application</b> | <b>Interactive</b>  | <b>Application of statistical packages</b> | <b>One-way variance analysis model Basic statistical tables</b>                                          | 3     | .3       |
| <b>&amp; Testing Application</b> | <b>Interactive</b>  | <b>program Power Point</b>                 | <b>Power Point program concept - benefits run components of the home screen concept of presentations</b> | 3     | .4       |
| <b>&amp; Testing Application</b> | <b>Interactive</b>  | <b>Learn about the program</b>             | <b>Build a new presentation with ready-made templates</b>                                                | 3     | .5       |
| <b>&amp; Testing Application</b> | <b>Interactive</b>  | <b>Dealing with the programC</b>           | <b>How to add drawings through drawing tools,</b>                                                        | 3     | .6       |
| <b>&amp; Testing Application</b> | <b>Interactive</b>  | <b>Apply effects</b>                       | <b>Control the colors and floor of the chip</b>                                                          | 3     | .7       |
| <b>&amp; Testing Application</b> | <b>Interactive</b>  | <b>Apply effects</b>                       | <b>Add ready-made art clips or media and zoom in and out images</b>                                      | 3     | .8       |

|                                      |                         |                                            |                                                                                                                        |   |     |
|--------------------------------------|-------------------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---|-----|
|                                      |                         |                                            |                                                                                                                        |   |     |
| <b>&amp; Testing Application</b>     | <b>Interac<br/>tive</b> | <b>Apply<br/>effects</b>                   | <b>Minimize Add charts or tables<br/>from Excel.</b>                                                                   | 3 | .9  |
| <b>&amp; Testing Application</b>     | <b>Interac<br/>tive</b> | <b>Dealing<br/>with the<br/>programC</b>   | <b>, insert a new slide Text or<br/>graphics Putting notes<br/>Entering titles Editing text<br/>Control its format</b> | 3 | .10 |
| <b>&amp; Testing Application</b>     | <b>Interac<br/>tive</b> | <b>Dealing<br/>with the<br/>programC</b>   | <b>Save the file, make the display<br/>modification, save the changes,<br/>plan the build of the view.</b>             | 3 | .11 |
| <b>&amp; Testing Application</b>     | <b>Interac<br/>tive</b> | <b>Working<br/>with files<br/>and data</b> | <b>Sort and switch data</b>                                                                                            | 3 | .12 |
| <b>&amp; Testing Application</b>     | <b>Interac<br/>tive</b> | <b>Working<br/>with files<br/>and data</b> | <b>Cell retouching process Copy,<br/>move, copy absolute and<br/>relative cell calculations</b>                        | 3 | .13 |
| <b>&amp; Testing Application</b>     | <b>Interac<br/>tive</b> | <b>Format<br/>pages</b>                    | <b>Control page width Change its<br/>style with formatting tools</b>                                                   | 3 | .14 |
| <b>Testing &amp;<br/>Application</b> | <b>Interac<br/>tive</b> | <b>Format<br/>tables</b>                   | <b>Dealing with charts charts<br/>and their various components<br/>and elements and identifying<br/>their types</b>    | 3 | .15 |

Computer Fundamentals and Office Applications - ٢

And the Ministry of Higher Education and Scientific  
Research - Research and Development Department

Basics of Computer and Internet"Yusr Al-Mustafa Series for S

Dr. Ziad Muhammad Abboud, Dar Al-Dr. for ,٢ 0202 Office

Publishing and Distribution, Baghdad

0202

1 Required textbooks

2 Main references (sources)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <p>Using two researches from my research</p> <p><b>1. Encryption a text using affine cipher and hiding it in the colored image by using the Quantization stage, <u>Nada Abdul Aziz Mustafa, Iraq, Baghdad, University of Baghdad, College of Languages</u></b></p> <p><b>2. The Effect of the Smoothing Filter on an Image Encrypted By the Blowfish Algorithm Then Hiding It in A BMP Image <u>Nada Abdul Aziz Mustafa, Iraq, Baghdad, University of Baghdad, College of Languages</u></b></p> <p><b>3.Computer literacy BASICS 2012, LeBlanc, Brandon."</b></p> <p><b>A closer look at the, windows 7. 2009</b></p> <p><b>4.Computing Fundamentals, Innovative training works USA, Inc, 2006</b></p> | <p>Recommended books and references</p> <p>, ) reports , Scientific fields(</p> |
| <p>. Word 2010 Digital Classroom Book</p> <p><a href="https://www.agitraining.com/books/microsoft-office-books/word-2010-digital-classroom-book">https://www.agitraining.com/books/microsoft-office-books/word-2010-digital-classroom-book</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>WebsitesReferences, Web</p>                                                  |