



Ministry of Higher Education and Scientific Research
Scientific Supervision and Evaluation Authority
Quality Assurance and Academic Accreditation
Department
Accreditation section

Guide to Academic Program Description and Course Description

2024

Introduction:

The academic program constitutes an organized and coordinated package of courses that includes procedures and experiences designed to develop student competencies, thereby qualifying them to meet labor market requirements. It is reviewed and evaluated annually through internal or external audit programs such as the external examination program.

The academic program description provides a concise summary of the program's main characteristics and courses, showing the skills that students are expected to acquire in line with program objectives. This description is of great importance as it forms the cornerstone for obtaining programmatic accreditation, and is co-authored by teaching committees under the supervision of scientific departments.

This second-edition guide updates the vocabulary and provisions of the previous academic program guide in light of current developments and updates in Iraq's educational system. It encompasses the academic program description in its traditional annual form (in addition to the academic program description approved by the Studies Directorate per book No. 2906/3 dated 3/5/2023, concerning programs adopting the Bologna pathway).

In this context, we emphasize the importance of writing academic program and course descriptions to ensure the smooth running of the educational process.

Concepts and Terminology:

Academic Program Description: Provides a brief, positive summary of the program, including its vision, mission, goals, and a precise description of targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the student's expected learning outcomes, demonstrating what has been achieved in terms of maximum utilization of available learning opportunities. It is derived from the program description.

Program Vision: An ambitious outlook for the future of the academic program to be a developed, inspiring, motivating, realistic, and applicable program.

Program Mission: Clarifies the goals and activities necessary to achieve them in a concise manner, and defines the paths of program development and directions.

Program Goals: Statements describing what the academic program intends to achieve within a specific time period; they must be measurable and observable.

Curriculum Structure: All courses/study materials included in the academic program according to the adopted learning system (semester, annual, Bologna pathway — whether ministry, university, or college requirements) along with the number of credit units.

Learning Outcomes: A set of knowledge, skills, and values that the student acquires upon successfully completing the academic program. They must be defined for each course in a way that achieves the program goals.

Teaching and Learning Strategies: Strategies used by faculty members to develop teaching and student learning. They describe all classroom and extracurricular activities planned to achieve the program's learning outcomes.

Academic Program Description Form



University name: Al-Amal College For Specialized Medical Sciences

Scientific Department: Anesthesia Techniques

Academic or Professional Program Name: Anesthesia Techniques

Final Certificate

Academic System: Courses

Description Preparation Date: 19/3/2026

File Completion Date: 9/4/2026



Signature

Head of Department

Lec. Dr. Ali Salam Obeid

Date: 9/4/2026

Signature

Scientific Associate Name

Prof. Dr. Abdul Ameer Kadhum Farhood

Date: 11/4/2026

This file is checked by:

Department of Quality Assurance and University Performance

Director of Quality Assurance and University Performance : Prof. Dr. Abbass Fadhil

Date: 11/4/2026

Signature:



Approval of the Dean

1. Program Vision

The Anesthesia Techniques Department aspires to be the best department in Iraq by the year 2030.

2. Program Mission

To prepare qualified graduates in the field of anesthesia techniques who possess theoretical knowledge and scientific skills, and who contribute to supporting the health sector through high-quality teamwork within the medical team.

3. Program Goals

1. Train specialized personnel in anesthesia techniques with high competency.
2. Provide students with scientific knowledge in the fields of anesthesia and intensive care.
3. Develop clinical and applied skills in a real medical environment.
4. Reinforce professional ethics and teamwork.
5. Keep pace with scientific and technological advancements in the field of anesthesia.

4. Programmatic Accreditation

None

5. Other External Influences

Is there a sponsor for the program?

Ministry of Higher Education and Scientific Research / Private Education Administration (Private Education Authority).

6. Program Structure

Program Structure	No. of Courses	Credit Units	Percentage	Notes
Institutional Requirements	60	184	100%	Core course
College Requirements	—	Yes	—	—
Department Requirements	60	184	100%	—
Summer Training	2	Non-leveled	100%	—

* Notes may indicate whether the course is core or elective.

7. Program Description

Level / Year	Course Code	Course Name	Theory Hrs	Practical Hrs
Year 1 / Sem 1	ATU13ANT111C	Medical Physics 1	2	4
Year 1 / Sem 1	ATU13ANT112C	Anatomy 1	2	4
Year 1 / Sem 1	ATU13ANT113C	General Physiology 1	2	4
Year 1 / Sem 1	ATU13ANT114C	General Chemistry	2	4
Year 1 / Sem 1	ATU13ANT115C	Biology	2	4
Year 1 / Sem 1	ATU12	Fundamentals of Computing and AI	2	4
Year 1 / Sem 1	ATU13	Human Rights and Democracy	2	4
Year 1 / Sem 1	ATU13ANT116C	Medical Terminology	2	4
Year 1 / Sem 2	ATU13ANT121C	Medical Physics 2	2	4
Year 1 / Sem 2	ATU13ANT122C	Anatomy 2	2	4
Year 1 / Sem 2	ATU13ANT123C	General Physiology 2	2	4
Year 1 / Sem 2	ATU13ANT124C	Biological Chemistry	2	4
Year 1 / Sem 2	ATU13ANT125C	Microbiology	2	—
Year 1 / Sem 2	ATU11	Arabic Language	2	—
Year 2 / Sem 1	ATU13ANT211C	Anesthesia Fundamentals 1	2	4
Year 2 / Sem 1	ATU13ANT217C	Anesthesia Devices 1	2	4
Year 2 / Sem 1	ATU13ANT212C	Applied Physiology 1	2	4
Year 2 / Sem 1	ATU13ANT213C	Surgery Fundamentals 1	2	4
Year 2 / Sem 1	ATU13ANT214C	Internal Medicine Fundamentals 1	2	4
Year 2 / Sem 1	ATU13ANT215C	Pharmacology 1	2	4
Year 2 / Sem 1	ATU13ANT216C	Medical Terminology	2	—
Year 2 / Sem 1	ATU24	Ba'ath Party Crimes in Iraq	2	—
Year 2 / Sem 2	ATU13ANT221C	Anesthesia Fundamentals 2	2	4
Year 2 / Sem 2	ATU13ANT227C	Anesthesia Devices 2	2	4
Year 2 / Sem 2	ATU13ANT222C	Applied Physiology 2	2	4
Year 2 / Sem 2	ATU13ANT225C	Surgery Fundamentals 2	1	4
Year 2 / Sem 2	ATU13ANT223C	Internal Medicine Fundamentals 2	2	4
Year 2 / Sem 2	ATU13ANT224C	Pharmacology 2	2	2
Year 2 / Sem 2	ATU13ANT226C	Statistics	1	2
Year 2 / Sem 2	AT126	Arabic Language	2	—
Year 3 / Sem 1	ATU13ANT311C	Anesthesia 1	2	5
Year 3 / Sem 1	ATU13ANT312C	Intensive Care Fundamentals 1	2	4

Year 3 / Sem 1	ATU13ANT315C	Anesthesia Devices Techniques 1	2	4
Year 3 / Sem 1	ATU13ANT313C	Internal Medicine 1	2	4
Year 3 / Sem 1	ATU13ANT314C	Surgery 1	1	3
Year 3 / Sem 1	ATU13	Computer Applications 1	1	2
Year 3 / Sem 2	ATU13ANT321C	Anesthesia 2	2	5
Year 3 / Sem 2	ATU13ANT322C	Intensive Care Fundamentals 2	2	4
Year 3 / Sem 2	ATU13ANT326C	Anesthesia Devices Techniques 2	2	4
Year 3 / Sem 2	ATU13ANT323C	Internal Medicine 2	2	4
Year 3 / Sem 2	ATU13ANT325C	Surgery 2	1	3
Year 3 / Sem 2	ATU13	Computer Applications 2	1	2
Year 4 / Sem 1	ATU13ANT411C	Advanced Anesthesia 1	2	5
Year 4 / Sem 1	ATU13ANT415C	Advanced Anesthesia Devices 1	2	4
Year 4 / Sem 1	ATU13ANT412C	Intensive Care Techniques 1	2	4
Year 4 / Sem 1	ATU13ANT413C	Advanced Internal Medicine 1	2	3
Year 4 / Sem 1	ATU13ANT414C	Pain Medicine	2	3
Year 4 / Sem 1	ATU13ANT416C	Professional Ethics	2	—
Year 4 / Sem 2	ATU13ANT421C	Advanced Anesthesia 2	2	5
Year 4 / Sem 2	ATU13ANT425C	Advanced Anesthesia Devices 2	2	4
Year 4 / Sem 2	ATU13ANT422C	Intensive Care Techniques 2	2	4
Year 4 / Sem 2	ATU13ANT423C	Advanced Internal Medicine 2	2	3
Year 4 / Sem 2	ATU13ANT422C	Emergency Medicine	2	3
Year 4 / Sem 2	ATU13ANT426C	Graduation Project	2	—

8. Expected Program Learning Outcomes

A. Knowledge and Understanding

1. Graduate specialized scientific personnel.
2. Prepare and monitor the patient for anesthesia during operations.
3. Operate anesthesia and vital monitoring devices efficiently.
4. Work as part of the medical team inside operating rooms.
5. Apply professional safety procedures and infection control measures.

B. Intellectual Skills

1. The student uses tools correctly.
2. The student applies what has been learned practically.
3. The student performs appropriate procedures for encountered clinical cases.
4. Good familiarity with anesthesia science fundamentals and related sciences.
5. Good command of medical terminology and the English language.

C. Practical and Professional Skills

1. The student can differentiate between theory and practice, such as inserting an IV line and measuring a patient's blood pressure.
2. The student knows the anesthesia regions and how to administer narcotics and the types of drugs used in surgical procedures.
3. The student understands the importance of academic study materials.
4. The student meets patient safety requirements.
5. Commitment to the university institution's ethics.
6. Receiving information and cognitive acquisition.

9. Teaching and Learning Strategies

1. In-class learning through scientific and theoretical lectures.
2. Learning through hospital training.
3. Preparation of scientific reports and research.

10. Assessment Methods

1. Daily examinations.
2. Assignments.
3. Semester and final examinations.
4. Defense of graduation research projects.

11. Teaching Staff (Faculty Members)

No.	Name	General Spec.	Specific Spec.	Permanent	Lecturer	Remarks
1	M.D. Fadhil Hanzal Khalif	Industry	Industrial Clinical Nursing	✓		
2	Dr. Nadhim Imran Kadhim	Surgery	General Surgery	✓		
3	M.D. Ali Salam Ubaid	Nursing	Adult Nursing	✓		
4	M.M. Karrar Ra'ad Mohammed	Nursing	Adult Nursing	✓		
5	Asst. Prof. Dr. Mohammed Alaa Abd Al-Zahra	Chemistry	Biological Chemistry	✓		
6	Prof. Dr. Hassan Abd Al-Fattah	Chemistry	Biological Chemistry	✓		
7	M.M. Majid Hamid Jabr	Chemistry	Biological Chemistry		✓	
8	M.D. Mohammed Tujail	Science	Computer Science	✓		
9	M.M. Mohammed Hussein Turki	Science	Computer Science	✓		
10	M.D. Yassin Nadib Ali	Economics	Business Administration	✓		
11	M.M. Ali Mujabal	Physics	Medical Physics	✓		
12	M.M. Marooh Kadhim	Chemistry	Biological Chemistry	✓		
13	M.M. Haidar Idwan	Arabic Language	Arabic Language	✓		
14	M.D. Ghazi Ramadhan	General Medicine	Blood Diseases	✓		
15	M.D. Farah Talib	Diseases	Blood Sciences	✓		

12. Professional Development

1. Orienting newly appointed faculty members.
2. Directing new teaching staff on the need to develop scientific curricula and lecture delivery methods, and how to convey academic material to students.
3. Professional development for faculty members.
4. Working to generate innovative ideas and developing scientific laboratories and the practical aspect, given that students' specialization is scientific.

13. Admission Criteria

1. Secondary school GPA and centralized admission according to the Ministry of Higher Education and Scientific Research regulations.
2. Student interview to assess personal and physical qualifications.

14. Key Information Sources for the Program

1. Textbooks prescribed by the Ministry of Higher Education and Scientific Research.
2. International scientific references.
3. Library and internet resources.

15. Program Development Plan

The department possesses many methodological and research plans for the purpose of developing the department and the scientific environment, where the department's administration, council, and scientific committee work to provide all requirements for the department's development.

Program Skills Map

Mapping of program learning outcomes to individual courses

A — Knowledge and Understanding: A1, A2, A3, A4

B — Intellectual Skills: B1, B2, B3

C — Practical and Professional Skills: C1, C2, C3, C4

Level/Year	Code	Course Name	Type	Knowledge and understanding				mental Skills			practical and professional skills			
				A1	A2	A3	A4	B1	B2	B3	C1	C2	C3	C4
Y1/S1	ATU13ANT111C	Medical Physics 1	Core	✓	✓		✓	✓	✓		✓	✓	✓	
Y1/S1	ATU13ANT112C	Anatomy 1	Core	✓				✓	✓		✓		✓	✓
Y1/S1	ATU13ANT113C	General Physiology 1	Core	✓	✓			✓	✓		✓	✓	✓	✓
Y1/S1	ATU13ANT114C	General Chemistry	Core	✓	✓	✓		✓	✓		✓	✓	✓	✓
Y1/S1	ATU13ANT115C	Biology	Support	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Y1/S1	ATU12	Computing & AI	General	✓	✓		✓	✓	✓	✓	✓		✓	✓
Y1/S1	ATU13	Human Rights	General	✓	✓								✓	✓
Y1/S1	ATU13ANT116C	Medical Terminology	General	✓	✓	✓	✓	✓	✓		✓	✓	✓	
Y1/S2	ATU13ANT121C	Medical Physics 2	Core	✓	✓	✓		✓	✓		✓	✓		
Y1/S2	ATU13ANT122C	Anatomy 2	Core	✓				✓	✓				✓	✓
Y1/S2	ATU13ANT123C	General Physiology 2	Core	✓	✓			✓	✓		✓	✓	✓	✓
Y1/S2	ATU13ANT124C	Biological Chemistry	Core	✓		✓		✓	✓		✓	✓		✓
Y1/S2	ATU13ANT125C	Microbiology	Support	✓	✓			✓	✓		✓	✓	✓	✓
Y1/S2	ATU11	Arabic Language	General	✓	✓						✓		✓	✓
Y2/S1	ATU13ANT211C	Anesthesia Fundamentals 1	Core		✓	✓	✓	✓			✓		✓	
Y2/S1	ATU13ANT217C	Anesthesia Devices 1	Core	✓			✓	✓	✓	✓	✓	✓	✓	✓
Y2/S1	ATU13ANT212C	Applied Physiology 1	Core		✓	✓	✓	✓	✓	✓	✓	✓		
Y2/S1	ATU13ANT213C	Surgery Fundamentals 1	Core	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Y2/S1	ATU13ANT214C	Int. Medicine Fund. 1	Support	✓				✓	✓	✓	✓	✓	✓	✓
Y2/S1	ATU13ANT215C	Pharmacology 1	Support		✓	✓	✓	✓	✓	✓	✓		✓	
Y2/S1	ATU13ANT216C	Medical Terminology	Support				✓	✓	✓		✓	✓		
Y2/S1	ATU24	Ba'ath Party Crimes	Support	✓	✓				✓					✓
Y2/S2	ATU13ANT221C	Anesthesia Fundamentals 2	Core		✓	✓	✓	✓	✓	✓	✓	✓		
Y2/S2	ATU13ANT227C	Anesthesia Devices 2	Core	✓			✓	✓	✓	✓		✓	✓	✓
Y2/S2	ATU13ANT222C	Applied Physiology 2	Core		✓		✓	✓		✓	✓	✓		
Y2/S2	ATU13ANT225C	Surgery Fundamentals 2	Core	✓		✓	✓	✓	✓		✓	✓		✓
Y2/S2	ATU13ANT223C	Int. Medicine Fund. 2	Support	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Y2/S2	ATU13ANT224C	Pharmacology 2	Support	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Y2/S2	ATU13ANT226C	Statistics	Support	✓	✓			✓					✓	✓
Y2/S2	AT126	Arabic Language	Support	✓	✓	✓			✓			✓	✓	✓
Y3/S1	ATU13ANT311C	Anesthesia 1	Core		✓		✓	✓	✓	✓	✓	✓	✓	
Y3/S1	ATU13ANT312C	Intensive Care Fund. 1	Core		✓	✓		✓	✓	✓	✓	✓	✓	
Y3/S1	ATU13ANT315C	Anesthesia Devices Tech. 1	Core		✓	✓	✓	✓		✓	✓	✓		
Y3/S1	ATU13ANT313C	Internal Medicine 1	Support	✓			✓	✓	✓	✓	✓	✓	✓	✓
Y3/S1	ATU13ANT314C	Surgery 1	Core			✓	✓	✓	✓	✓	✓		✓	✓
Y3/S1	ATU13	Computer Applications 1	General	✓	✓		✓	✓	✓	✓		✓		✓
Y3/S2	ATU13ANT321C	Anesthesia 2	Core		✓	✓	✓	✓	✓	✓	✓	✓	✓	
Y3/S2	ATU13ANT322C	Intensive Care Fund. 2	Core		✓	✓	✓	✓	✓		✓		✓	
Y3/S2	ATU13ANT326C	Anesthesia Devices Tech. 2	Core		✓		✓	✓		✓	✓	✓	✓	

Y3/S2	ATU13ANT323C	Internal Medicine 2	Support				✓	✓	✓	✓		✓	✓	
Y3/S2	ATU13ANT325C	Surgery 2	Core	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Y3/S2	ATU13	Computer Applications 2	General	✓	✓		✓	✓	✓	✓		✓		✓
Y4/S1	ATU13ANT411C	Advanced Anesthesia 1	Core		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Y4/S1	ATU13ANT415C	Adv. Anesthesia Devices 1	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Y4/S1	ATU13ANT412C	Intensive Care Tech. 1	Core	✓	✓		✓	✓	✓	✓		✓	✓	✓
Y4/S1	ATU13ANT413C	Adv. Internal Medicine 1	Core	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Y4/S1	ATU13ANT414C	Pain Medicine	Support	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Y4/S1	ATU13ANT416C	Professional Ethics	Support		✓							✓		
Y4/S2	ATU13ANT421C	Advanced Anesthesia 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Y4/S2	ATU13ANT425C	Adv. Anesthesia Devices 2	Core		✓		✓	✓	✓	✓		✓	✓	✓
Y4/S2	ATU13ANT422C	Intensive Care Tech. 2	Core	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Y4/S2	ATU13ANT423C	Adv. Internal Medicine 2	Core	✓	✓		✓	✓	✓	✓		✓	✓	✓
Y4/S2	ATU13ANT422C	Emergency Medicine	Support	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Y4/S2	ATU13ANT426C	Graduation Project	Support	✓	✓	✓	✓		✓		✓	✓	✓	✓

* Please place a checkmark in the cells corresponding to the individual learning outcomes subject to program assessment.

Course Description Form

1. Course Name:					
General Physiology (2)					
2. Course Code:					
PHY					
3. Semester / Year:					
2 nd course 1 st stage 2025-2026					
4. Description Preparation Date:					
2026-3-4					
5. Available Attendance Forms:					
In-person					
6. Number of Credit Hours (Total) / Number of Units (Total)					
6 hours / 4 credits					
7. Course administrator's name (mention all, if more than one name)					
Lecturer Dr. Farah Talib Jubarah Lecturer Dr. Ghazi Ramadhan					
8. Course Objectives					
This course aims to introduce students to the basic concepts of the physiology of major body systems, especially the respiratory, digestive, urinary, nervous, endocrine, reproductive, skeletal, and special sensory systems. It also aims to enable students to understand physiological regulation, gas transport, body temperature control, kidney function, and hormonal regulation, while developing practical skills in blood, urine, and pulmonary function tests.					
9. Teaching and Learning Strategies					
The course is delivered through lectures, classroom discussions, illustrative diagrams, guided explanation, and laboratory training. Applied examples and modern teaching aids are also used to relate physiological concepts to essential clinical and laboratory applications.					
10. Course Structure					
First: Theoretical Course Structure					
Week	Hours	Required Learning Outcome	Unit or subject name	Learning method	Evaluation method
1	2	Explain carbon dioxide transport in blood and the mechanism of its exchange.	Carbon Dioxide Transport and Exchange	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
2	2	Explain lung volumes and capacities and the different types of hypoxia.	Lung Volumes and Capacities, Types of Hypoxia	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
3	2	Lung Volumes and Capacities, Types of Hypoxia	Physiology of Digestive System and Gastric Phases	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation

4	2	Explain the steps of digestion and absorption of carbohydrates, proteins, and fats.	Digestion and Absorption of Nutrients	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
5	2	Explain the urinary system, renal functions, and urine formation.	Urinary System, Renal Functions, and Urine Formation	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
6	2	Explain the role of the kidney in maintaining body fluids, regulating blood pressure, and acid-base balance.	Role of Kidney in Body Fluid, Blood Pressure, and Acid-Base Regulation	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
7	2	Explain body temperature regulation and control mechanisms.	Body Temperature Regulation and Control	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
8	2	Explain the central nervous system, brain functions, and major centers.	Explain the central nervous system, brain functions, and major centers.	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
9	2	Explain the spinal cord, cerebrospinal fluid, and spinal reflexes.	Spinal Cord, CSF, and Spinal Reflexes	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
10	2	Explain the peripheral nervous system, autonomic nervous system, and sensory system.	PNS, Autonomic and Sensory Systems	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
11	2	Explain hormone regulation, types, and secretion.	Endocrine System: Hormone Control, Types, and Secretion	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
12	2	Explain hormonal secretion from different glands.	Hormonal Secretion from Different Glands	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation

13	2	Explain male and female reproductive physiology.	Male and Female Reproductive Systems	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
14	2	Explain skeletal system physiology and its general functions.	Skeletal System Physiology	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation
15	2	Explain the physiology of special senses, including vision, hearing, smell, and taste.	Explain the physiology of special senses, including vision, hearing, smell, and taste.	Lectures, discussions, illustrative diagrams	Quizzes, written examinations, class participation

Second: Practical Course Structure

Week	Hours	Required Learning Outcome	Unit or subject name	Learning method	Evaluation method
1	4	Determine ABO blood groups using practical methods.	ABO Blood Types	Practical training, demonstration	Practical assessment, direct observation
2	4	ABO Blood Types	Rh Factor	Practical training, demonstration	Practical assessment, direct observation
3	4	Rh Factor	Cross-Match Test	Practical training, demonstration	Practical assessment, direct observation
4	4	Perform blood coagulation tests and platelet count.	Blood Coagulation Tests and Platelet Count	Practical training, demonstration	Practical assessment, direct observation
5	4	Measure the specific gravity of blood and plasma.	Specific Gravity of Blood and Plasma	Practical training, demonstration	Practical assessment, direct observation
6	4	Measure bleeding time by different methods.	Bleeding Time	Practical training, demonstration	Practical assessment, direct observation
7	4	Measure clotting time using capillary tube and slide methods.	Clotting Time: Capillary Tube and Slide Methods	Practical training, demonstration	Practical assessment, direct observation

8	4	Measure clotting time using Lee and White method.	Clotting Time: Lee and White Method	Practical training, demonstration	Practical assessment, direct observation
9	4	Clotting Time: Lee and White Method	Scientific Movies on Bleeding and Blood Transfusion	Practical training, demonstration	Practical assessment, direct observation
10	4	Perform red blood cell fragility test.	RBC Fragility Test	Practical training, demonstration	Practical assessment, direct observation
11	4	Measure blood viscosity.	Determination of Blood Viscosity	Practical training, demonstration	Practical assessment, direct observation
12	4	Perform urine collection and physical examination.	Urine Collection and Physical Examination	Practical training, demonstration	Practical assessment, direct observation
13	4	Perform chemical examination of urine and urine creatinine estimation.	Perform chemical examination of urine and urine creatinine estimation.	Practical training, demonstration	Practical assessment, direct observation
14	4	Perform microscopic examination of urine and interpret findings.	Microscopic Examination of Urine	Practical training, demonstration	Practical assessment, direct observation
15	4	Perform pulmonary function test and interpret the basic results.	Pulmonary Function Test	Practical training, demonstration	Practical assessment, direct observation

11. Course Evaluation

Students are evaluated through quizzes, assignments, class participation, written examinations, direct practical assessment, laboratory records, and practical examinations in order to assess both their theoretical understanding and laboratory performance.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	The course depends on standard textbooks in medical physiology and human anatomy and physiology, consistent with the theoretical and practical content of the course.
Main references (sources)	<ul style="list-style-type: none"> Principles of Anatomy and Physiology Ross & Wilson Anatomy and Physiology in Health and Illness

	<ul style="list-style-type: none"> • Clinical Neuroanatomy • Anatomy & Physiology
Recommended books and references (scientific journals, reports...)	<p>Recommended references include:</p> <ul style="list-style-type: none"> • Best & Taylor's Physiology • Medical Physiology • Essentials of Human Anatomy & Physiology • Journals such as Physiology Journal, Journal of Physiology, and Annual Review of Physiology.
Electronic References, Websites	<ul style="list-style-type: none"> • MedlinePlus • Mayo Clinic • WebMD • NIH • American Heart Association • American Cancer Society • NIDDK • American Lung Association • CDC • WHO

Ministry of Higher Education and Scientific Research
Al-Amal College for Medical Specialties
Department of Anesthesia – First Year
Course Description Form

Review of the Performance of Higher Education Institution (Academic Program Review)

This course description provides a summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether they have made the most of the available learning opportunities. It must be linked to the program description.

Basic Course Information	
Educational Institution	Ministry of Higher Education for Medical Sciences / College of Specialized Medical Sciences / Department of Anesthesia Techniques
University Department / Center	Department of Anesthesia Techniques
Course Name / Code	Physiology–ATU13ANT123C
Programs in which it is included	Bachelor of Anesthesia Technology – First Year
Available Forms of Attendance	Face-to-Face (Theoretical + Laboratory)
Semester / Year	Second Semester / First Year
Total Number of Study Hours	60 Hours
Date of Preparing this Description	1 – 4 – 2026

Course Objectives
<p>This course aims to provide first-year Anesthesia Department students with fundamental knowledge in Physiology and its clinical implications in anesthesia practice.</p> <p>The course seeks to achieve the following objectives:</p> <ol style="list-style-type: none"> 1. Introduce students to the basic concepts of Physiology and the classification of Physiology. 2. To introduce the student to the body's organs physiology 3. To identify the Physiology parts that make up each organ. 4. To distinguish the tissues that comprise each organ.

Learning Outcomes, Teaching & Learning Methods, and Evaluation
A – Knowledge and Understanding
A1. The student defines and classifies Physiology of parts.
A2. The student explains the functional structure of different body parts.
Teaching & Learning Methods: Practical lectures, presentations, Lab. learning, discussions.
Evaluation Methods: Lab. tests (essay), midterm exam, final exam.
B – Subject-Specific Skills
B1. The student performs basic physiological examinations.

B2. The student applies the exam of laboratory.
B3. The student distinguishes between types of different body Physiology parts.
Teaching & Learning Methods: Practical laboratory sessions, microscope training, hands
Evaluation Methods: Practical laboratory assessment (OSCE),
C – Thinking Skills
C1. The student analyzes the methods of analysis.
C2. The student evaluates the effectiveness of the laboratory work protocols
Teaching & Learning Methods: Problem-Based Learning (PBL), case studies, group discussions.
Evaluation Methods: Applied tests, clinical case analysis, short research projects.
D – General and Transferable Skills
D1. The student demonstrates the ability to work within a multidisciplinary medical team.
D2. The student shows skills in scientific communication and medical report writing.
D3. The student develops self-learning and scientific research abilities in Physiology.

Weekly Course Structure					
Week	Hours	Unit Name / Topic	Required Learning Outcomes	Learning Method	Evaluation Method
1	4	ABO blood types; slide method; true method	B2	Lessons and practical lab session	practical tests
2	4	Rh. Factor; slide method; tube method	B2,C1	Lessons and practical lab session	practical tests
3	4	. Cross, match test.	B2	Lessons and practical lab session	practical tests
4	4	Blood coagulation tests; platelets count.	B2	Lessons and practical lab session	practical tests
5	4	The specific gravity of blood and plasma.	B2	Lessons and practical lab session	practical tests
6	4	Bleeding time (Ducks method, ivy's method).	B2,C1	Lessons and practical lab session	practical tests
7	4	Mid-term exam 1 And	Students understand questions and answer	Lessons and practical lab session	practical tests

8	4	Clotting time (capillary tube. Method; lid method).	B2,C1	Lessons and practical lab session	practical tests
9	4	Clotting time (lee and while method).	B2,C1	Lessons and practical lab session	practical tests
10	4	Scientific movies show bleeding and blood transfusion.	B2,	Lessons and practical lab session	practical tests
11	4	Fragility test (R.B.C. fragility test).	B2	Lessons and practical lab session	practical tests
12	4	Determination of viscosity of blood	B2,C1	Lessons and practical lab session	practical tests
13	4	Examination of the urine; urine collection physical and The chemical examination.	B2,C1	Lessons and practical lab session	practical tests
14	4	The microscopic examination of urine	B3,	Lessons and practical lab session	practical tests
15	4	The pulmonary function test.	B2,C1	Lessons and practical lab session	practical tests

Course Infrastructure

Core Textbooks / Course Books	<p><i>3 O O K of Medical Physiology</i> I O N Arthur C. Guyton, M.D.† Professor Emeritus De <i>offbrand's Essential Haematology, 8th ed. Wiley-Blackwell,</i> 3- <i>Tietz, Textbook of Clinical Chemistry and Molecular Diagnostics, 6th ed. Elsevier, 2018</i></p>
Required Readings / References	<p>1- nOnline scientific reference (ABO/Rh, cross-match, coagulation) s and Red Cell Antigens – NCBI Bookshelf https://www.ncbi.nlm.nih.gov/books/NBK2267/ 2- Online review (urine analysis, creatinine, microscopic exam)“Urinalysis: A Comprehensive Review” – American Family Physician (AAFP) https://www.aafp.org/pubs/afp/issues/2005/0315/p1153.html</p>
Special Requirements	Equipped Physiology laboratory, demonstration pictures and instruments
Electronic Websites	College official website + Internal e-Learning Management System (LMS)
Social Services	Guest lectures from medical Physiology specialists; field visits to department laboratories.

Admission & Enrollment Requirements

Prerequisites	High School Physiology, First-Year
Minimum Number of Students	15 Students

Maximum Number of Students	40 Students
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Grade Distribution & Assessment	
Percentage	Assessment Type
20%	Coursework (Quizzes + Reports)
10%	Practical Laboratory Assessment
30%	Midterm Examination
40%	Final Examination (Theory + Practical)
Total: 100%	

Signatures	
Name of the Instructor	Lect. Dr. Ghazi Mohamad RAMADAN
Head of Department	Lect. Dr. Ali Salam Obeid
Dean of the College	Prof. Dr. Mufeed Jaleel Awadh

Ministry of Higher Education and Scientific Research
Al-Amal College for Medical Specialties
Department of Anesthesia – First Year
Course Description Form

Review of the Performance of Higher Education Institution (Academic Program Review)

This course description provides a summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether they have made the most of the available learning opportunities. It must be linked to the program description.

Basic Course Information	
Educational Institution	Ministry of Higher Education for Medical Sciences / College of Specialized Medical Sciences / Department of Anesthesia Techniques
University Department / Center	Department of Anesthesia Techniques
Course Name / Code	Anatomy – ATU13ANT122C
Programs in which it is included	Bachelor of Anesthesia Technology – First Year
Available Forms of Attendance	Face-to-Face (Theoretical + Laboratory)
Semester / Year	Second Semester / First Year
Total Number of Study Hours	30 Hours
Date of Preparing this Description	1 – 4 – 2026

Course Objectives
<p>This course aims to provide first-year Anesthesia Department students with fundamental knowledge in anatomy and its clinical implications in anesthesia practice. The course seeks to achieve the following objectives:</p> <ol style="list-style-type: none"> 1. Introduce students to the basic concepts of anatomy and the classification of anatomy. 2. To introduce the student to the body's organs and tissues. 3. To identify the parts that make up each organ. 4. To distinguish the tissues that comprise each organ.

Learning Outcomes, Teaching & Learning Methods, and Evaluation
A – Knowledge and Understanding
A1. The student defines and classifies anatomy parts.
A2. The student explains the functional structure of different anatomical body parts.
Teaching & Learning Methods: Theoretical lectures, presentations, case-based learning, classroom discussions.
Evaluation Methods: Written tests (objective and essay), midterm exam, final exam.
B – Subject-Specific Skills

B1. The student performs basic anatomical examinations including demonstration instruments.
B2. The student applies the exam clinically.
B3. The student distinguishes between types of different body anatomy parts.
Teaching & Learning Methods: Practical laboratory sessions, microscope training, hands-on sterilization technique drills.
Evaluation Methods: Practical laboratory assessment (OSCE),
C – Thinking Skills
C1. The student analyzes hospital-acquired infection cases and proposes prevention measures.
C2. The student evaluates the effectiveness of infection control protocols in the anesthesia environment.
Teaching & Learning Methods: Problem-Based Learning (PBL), case studies, group discussions.
Evaluation Methods: Applied tests, clinical case analysis, short research projects.
D – General and Transferable Skills
D1. The student demonstrates the ability to work within a multidisciplinary medical team.
D2. The student shows skills in scientific communication and medical report writing.
D3. The student develops self-learning and scientific research abilities in anatomy.

Weekly Course Structure					
Week	Hours	Unit Name / Topic	Required Learning Outcomes	Learning Method	Evaluation Method
1	2	CNS structures and functions	A1	Lecture	Lecture + presentation
2	2	PNS spinal nerves	A1, A2	Lecture	Lecture + presentation
3	2	Sensory and motor nerve system	A2	Lecture	Lecture + presentation
4	2	GIT system	B1	Lecture	Lecture + presentation
5	2	Salivary glands structures	A2, A3	Lecture	Lecture + presentation
6	2	Liver anatomy structures and functions	A2, A3	Lecture	Lecture + presentation
7	2	Mid-term exam 1	Students understand questions and answer	Attendant actual exam	Exam
8	2	Urinary system	A1, A3	Lecture	Midterm Exam
9	2	Muscular system	A3, C1	PBL + Discussion	Case Analysis
10	2	Endocrine glands	B2, C2	Lecture + Lab	Performance Obs.

11	2	Skeletal anatomy	B2	Practical Lab	OSCE
12	2	Male reproductive system	A4	Lecture	Objective Test
13	2	Female reproductive system	A4, C1	Case Study	Group Discussion
14	2	Special sense anatomy	B3, D1	Lecture + Role-Play	Written Report
15	2	Development and inheritance	C2, D2, D3	Presentation + Discussion	Research Project

Course Infrastructure

Core Textbooks / Course Books	Clinical anatomy. 11 th ed. Richard. Snell, 2014
Required Readings / References	<ul style="list-style-type: none"> - Nature - Science E. books and websites – WHO official resources.
Special Requirements	Equipped anatomy laboratory, demonstration pictures and instruments
Electronic Websites	College official website + Internal e-Learning Management System (LMS)
Social Services	Guest lectures from medical anatomy specialists; field visits to department laboratories.

Admission & Enrollment Requirements

Prerequisites	High School anatomy, First-Year Chemistry
Minimum Number of Students	15 Students
Maximum Number of Students	40 Students

Grade Distribution & Assessment

Percentage	Assessment Type
20%	Coursework (Quizzes + Reports)
10%	Practical Laboratory Assessment
30%	Midterm Examination
40%	Final Examination (Theory + Practical)
Total: 100%	

Signatures

Name of the Instructor	Lect. Dr. Ali Salam Obeid
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Head of Department	Lect. Dr. Ali Salam Obeid
Dean of the College	Prof.Dr.Mufeed Jaleel Awadh

Ministry of Higher Education and Scientific Research
Al-Amal College for Medical Specialties
Department of Anesthesia – First Year
Course Description Form

Review of the Performance of Higher Education Institution (Academic Program Review)

This course description provides a summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether they have made the most of the available learning opportunities. It must be linked to the program description.

Basic Course Information	
Educational Institution	Ministry of Higher Education for Medical Sciences / College of Specialized Medical Sciences / Department of Anesthesia Techniques
University Department / Center	Department of Anesthesia Techniques
Course Name / Code	Anatomy – ATU13ANT122C
Programs in which it is included	Bachelor of Anesthesia Technology – First Year
Available Forms of Attendance	Face-to-Face (Theoretical + Laboratory)
Semester / Year	Second Semester / First Year
Total Number of Study Hours	30 Hours
Date of Preparing this Description	1 – 4 – 2026

Course Objectives
<p>This course aims to provide first-year Anesthesia Department students with fundamental knowledge in anatomy and its clinical implications in anesthesia practice. The course seeks to achieve the following objectives:</p> <ol style="list-style-type: none"> 1. Introduce students to the basic concepts of anatomy and the classification of anatomy. 2. To introduce the student to the body's organs and tissues. 3. To identify the parts that make up each organ. 4. To distinguish the tissues that comprise each organ.

Learning Outcomes, Teaching & Learning Methods, and Evaluation
A – Knowledge and Understanding
1. The student defines and classifies anatomy parts.
2. The student explains the functional structure of different anatomical body parts.
Teaching & Learning Methods: Theoretical lectures, presentations, case-based learning, classroom discussions.
Evaluation Methods: Written tests (objective and essay), midterm exam, final exam.
B – Subject-Specific Skills
1. The student performs basic anatomical examinations including demonstration instruments.

2. The student applies the exam clinically.
3. The student distinguishes between types of different body anatomy parts.
Teaching & Learning Methods: Practical laboratory sessions, microscope training, hands-on sterilization technique drills.
Evaluation Methods: Practical laboratory assessment (OSCE),
C – Thinking Skills
1. The student analyzes hospital-acquired infection cases and proposes prevention measures.
2. The student evaluates the effectiveness of infection control protocols in the anesthesia environment.
Teaching & Learning Methods: Problem-Based Learning (PBL), case studies, group discussions.
Evaluation Methods: Applied tests, clinical case analysis, short research projects.
D – General and Transferable Skills
1. The student demonstrates the ability to work within a multidisciplinary medical team.
2. The student shows skills in scientific communication and medical report writing.
3. The student develops self-learning and scientific research abilities in anatomy.

Weekly Course Structure					
Week	Hours	Unit Name / Topic	Required Learning Outcomes	Learning Method	Evaluation Method
1	2	CNS structures and functions	A1	Lecture	Lecture + presentation + Laboratory+quiz
2	2	PNS spinal nerves	A1, A2	Lecture	Lecture + presentation + Laboratory+quiz
3	2	Sensory and motor nerve system	A2	Lecture	Lecture + presentation + Laboratory+quiz
4	2	GIT system	B1	Lecture	Lecture + presentation + Laboratory+quiz
5	2	Salivary glands structures	A2, A3	Lecture	Lecture + presentation + +quiz Laboratory
6	2	Liver anatomy structures and functions	A2, A3	Lecture	Lecture + presentation + Laboratory+quiz
7	2	Mid-term exam 1	Students understand questions and answer	Attendant actual exam	Exam
8	2	Urinary system	A1, A3	Lecture	Midterm Exam

9	2	Muscular system	A3, C1	PBL + Discussion	Case Analysis
10	2	Endocrine glands	B2, C2	Lecture + Lab	Performance Obs.
11	2	Skeletal anatomy	B2	Practical Lab	OSCE
12	2	Male reproductive system	A4	Lecture	Objective Test
13	2	Female reproductive system	A4, C1	Case Study	Group Discussion
14	2	Special sense anatomy	B3, D1	Lecture + Role-Play	Written Report
15	2	Development and inheritance	C2, D2, D3	Presentation + Discussion	Research Project

Course Infrastructure

Core Textbooks / Course Books	Clinical anatomy. 11 th ed. Richard. Snell, 2014
Required Readings / References	<ul style="list-style-type: none"> - Nature - Science E. books and websites – WHO official resources.
Special Requirements	Equipped anatomy laboratory, demonstration pictures and instruments
Electronic Websites	College official website + Internal e-Learning Management System (LMS)
Social Services	Guest lectures from medical anatomy specialists; field visits to department laboratories.

Admission & Enrollment Requirements

Prerequisites	High School anatomy, First-Year Chemistry
Minimum Number of Students	15 Students
Maximum Number of Students	40 Students

Grade Distribution & Assessment

Percentage	Assessment Type
20%	Coursework (Quizzes + Reports)
10%	Practical Laboratory Assessment
30%	Midterm Examination
40%	Final Examination (Theory + Practical)
Total: 100%	

Signatures

Name of the Instructor	Ass.Lect. Maher Jawad
Head of Department	Lect. Dr. Ali Salam Obeid
Dean of the College	Prof.Dr.Mufeed Jaleel Awadh

**Review the performance of the higher education institution
(review of the academic program)**

وصف المقرر

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

1. Educational Institution	Ministry of Higher Education and Scientific Research - Al- Amal College for Specialized Medical Sciences – Department of anaesthesia Technology
2. University Department / Center	Anaesthesia Technology
3. Course Name / Code	Biochemistry- ATU13AMT124C
4. Programs in which it is included	1st year anaesthesia students
5. Available Forms of Attendance	
6. Semester / Year	Second / 2025-2026
7. Total Number of Study Hours	30
8. Date of preparing this description	12/3/2026
9. Course Objectives:	
1. Learning Outcomes, Teaching and Learning Methods, and Evaluation	

A. Knowledge and Understanding

- **Knowledge metabolism of protein**
- **Understanding general properties of enzymes**
- **Classification vitamins**
- **Knowledge biosynthesis and catabolism of fatty acids**

B. Subject-Specific Skills

- **Understanding the steroid biosynthesis**
- **Identifying the types of vitamins**
- **Understanding metabolism of carbohydrates**

Teaching and Learning Methods

Lectures

- **interactive discussions**
and laboratory experiments

C. Evaluation Methods

- **Written examinations**
- **Quizzes**
- **Homework and assignments**
Laboratory evaluations

D. Thinking Skills

- **Analytical thinking**
- **Critical thinking**
- **Problem-solving skills**

e. General and Transferable Skills

. communication skills

Teamwork skills

Time managment

11. Course Structure					
Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method
1	2	Identify on	Introduction on organic chemistry	theoretical	Quizzes and audience
2	2	understanding	Metabolism of carbohydrate	theoretical	Quizzes and audience
3	2	understanding	Metabolism of protein	theoretical	Quizzes and audience
4	2	understanding	Metabolism of fatty acids	theoretical	Quizzes and audience
5	2	understanding	Catabolism of fatty acid	theoretical	Quizzes and audience
6	2	understanding	Enzyme activity and inhibition	theoretical	Quizzes and audience
7	2	understanding	Types of vitamins	theoretical	Quizzes and audience
8	2	understanding	Steroid biosynthesis	theoretical	Quizzes and audience
9	2	understanding	Nitrogen biosynthesis	theoretical	Quizzes and audience
10	2	understanding	Fat soluble vitamins	theoretical	Quizzes and audience
11	2	understanding	Water soluble vitamins	theoretical	Quizzes and audience
12	2	understanding	Cell compositions	theoretical	Quizzes and audience

13	2	understanding	Chemical constituents of human	theoretical	Quizzes and audience
14	2	understanding	Enzyme functions	theoretical	Quizzes and audience

12. Infrastructure	
Required Readings:	References: learning principles of biochemistry, Michael M. David L. Nelson, 2010
Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites: http://www.Springer
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	Organizing workshops and courses for graduates:

13	
Prerequisites	
Minimum Number of Students	
Maximum Number of Students	

Name of the Instructor: prof. Dr. Hassan Abdelfattah

نموذج وصف المقرر

Review the performance of the higher education institution
(review of the academic program)

وصف المقرر

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

1. Educational Institution	Alamal college
2. University Department / Center	Lezer.. Instezea
3. Course Name / Code	
4. Programs in which it is included	Google meet
5. Available Forms of Attendance	.Lap
6. Semester / Year	Semester
7. Total Number of Study Hours	8
8. Date of preparing this description	4/1
9. Course Objectives:	
To bridge physical concepts with medical applications through hands-on" experiments, and to develop skills in using medical instruments accurately for safe ".and effective diagnosis	
1. Learning Outcomes, Teaching and Learning Methods, and Evaluation	

A. Knowledge and Understanding

Friction and Viscosity: Understanding blood flow mechanics and the relationship between viscosity, blood pressure, cardiac workload, and clot prevention
Friction: Grasping the role of synovial fluids in reducing joint friction and designing efficient prosthetic limbs
Hooke's Law: Realizing the elastic properties of biological tissues like lungs and blood vessels and how they are affected by diseases
Slit Width: Understanding laser diffraction and its use as a precise tool for measuring microscopic dimensions in medical labs

B. Subject-Specific Skills

Knowledge: Understanding the relationship of viscosity, elasticity, friction, and diffraction with the body's vital functions
Skills: Measuring viscosity and elasticity coefficients, and calculating cell dimensions using laser with laboratory precision

Teaching and Learning Methods

.Through various laboratory instruments

C. Evaluation Methods

Koz.. Report

D. Thinking Skills

Developing the ability to analyze laboratory data" graphically, linking physical laws (such as elasticity and viscosity) to medical diagnosis, and solving computational "problems accurately

Teaching and Learning Methods

Google meet

Evaluation Methods

Test

e. General and Transferable Skills

many thanks

11. Course Structure					
Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method
1	2	Learning about friction its important medical ap	Friction	Lap	Koz
2	2	Diagnosing cardiovascular	Viscosity	Lap	Koz
3	2	Finding unknown resistance	Wheatstone bridge	Lap	Koz
4	2	Measureing a very thin signal slit width	Leser experiment	Lap	Koz
5					
6					
7					
8					
9					
10					
11					

12					
13					
14					

12. Infrastructure	
Required Readings:	References: Jon kameron book
Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites:
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	Organizing workshops and courses for graduates:

13.

Prerequisites

Minimum Number of Students

15

Maximum Number of Students

25

Name of the Instructor: