

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



Academic Program and Course Description
Al-Turath University
College of Health and Medical Techniques
Department of Anesthesia Techniques

University Name: Al-Turath University

College/Institute: College of Health and Medical Techniques

Department: Anesthesia Techniques

Academic or Professional Program: Bachelor's Degree in Anesthesia Techniques

Academic System: courses

Date of Profile Creation: 1/5/2026

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Date 21 / 5 / 2026

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Head of department

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Date: 21 / 5 / 2026

File reviewed by

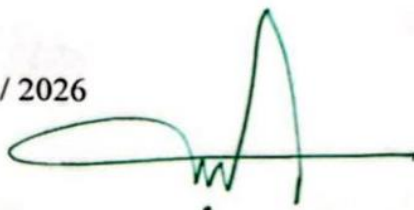
Quality Assurance and University Performance Division

Director of the Quality Assurance and University Performance

Division: **Assist.Lec Ibrahim Mohanad Nadeem**

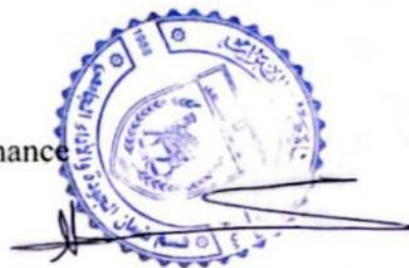
Signature

Date: 21 / 5 / 2026



Approved by the dean

Asst. Prof. Dr. Abbas Hashim Abdulsalam



Introduction:

An educational program is a coordinated and organized set of courses that includes procedures and experiences structured as academic modules, the primary purpose of which is to build and refine graduates' skills, thereby qualifying them to meet the demands of the job market. It is reviewed and evaluated annually through internal or external audit procedures and programs, such as the Examiner Program, etc..

The academic program description provides a concise summary of the program's main features and its courses, outlining the skills students are expected to acquire based on the academic program's objectives. The importance of this description lies in the fact that it serves as the cornerstone for obtaining program accreditation; it is drafted by the faculty under the supervision of the academic committees in the respective departments.

This second edition of the guide includes a description of the academic program following an update of the terminology and sections of the previous guide in light of recent developments in the educational system in Iraq. The academic program description was previously presented in its traditional format— (annual, semester-based) system, as well as the adoption of the academic program description circulated pursuant to the Directorate of Studies' letter No. TM3/2906 dated May 3, 2023, regarding programs that adopt the Bologna Process as the basis for their operations.

In this regard, we cannot but emphasize the importance of writing descriptions of academic programs and courses to ensure the smooth running of the educational process.

Concepts and Terminology:

Academic Program Description: The academic program description provides a concise summary of the program's vision, mission, and objectives, including a detailed description of the targeted learning outcomes in accordance with specific learning strategies.

Course Description: Provides a concise summary of the course's key characteristics and the learning outcomes expected of students, demonstrating whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An aspirational vision of the academic program's future, aiming to be a progressive, inspiring, motivating, realistic, and practical program.

Program Mission: Briefly outlines the program's objectives and the activities necessary to achieve them, while also defining the program's development paths and directions.

Program Objectives: These are statements describing what the academic program intends to achieve within a specific time frame; they must be measurable and observable.

Curriculum Structure: All courses/subjects included in the academic program in accordance with the approved learning system (semester, annual, Bologna track), whether they are required (by the Ministry, university, college, or academic department), along with the number of credit units.

Learning Outcomes: A coherent set of knowledge, skills, and values acquired by the student upon successful completion of the academic program; learning outcomes for each course must be defined in a manner that fulfills the program's objectives.

Teaching and Learning Strategies: These are the strategies used by faculty members to facilitate student learning; they are plans followed to achieve learning objectives. In other words, they describe all in-class and out-of-class activities designed to achieve the program's learning outcomes.

1. Program Vision

The Department of Anesthesiology at Al-Turath University strives for academic excellence within its field by ensuring the quality of education and clinical training and keeping pace with developments and updates in the curriculum at both the theoretical and practical levels. The department also seeks to graduate highly competent professionals to work in the private or public sectors.

2. Program Mission

To provide high-quality education in both theoretical and practical aspects within an appropriate learning environment. This ensures that students are highly qualified to meet the demands of the job market in both the public and private sectors and possess a high level of behavioral and professional preparedness in line with the departments of the department. The department also encourages the publication of rigorous scientific research and works diligently to develop students' analytical and critical thinking skills.

3. Program Objectives

1. Continuously update teaching methods and improve the quality of training and education within 1–3 years
2. To graduate highly competent students who are prepared for the job market within 3–5 years
3. To develop the clinical skills necessary to work in hospitals at the highest level within 1–2 years
4. To foster professional conduct and work ethics within 1–2 years
5. To support and encourage students to engage in scientific research within 1–2 years
6. Continuously improving the department's program using the highest quality standards within 3–5 years
7. Analyze job market data and tailor the academic program to align with it within 1–3 years

4. Program Accreditation

The Anesthesia Technology program at the College of Health and Medical Technologies / Al-Turath University operates in accordance with approved national quality standards. The program also seeks to meet the requirements for specialized program accreditation from official Iraqi authorities and to update these requirements in accordance with international standards for medical and technical education, to ensure improved academic performance and the quality of educational outcomes

5. Other External Influences

The program benefits from ongoing cooperation with the Ministry of Higher Education and Scientific Research in the areas of academic supervision and quality assurance, in addition to coordinating with the Iraqi Ministry of Health and health education institutions to provide students with practical training and field experience opportunities in teaching hospitals and surgical centers, thereby reinforcing the practical aspects of the curriculum and meeting the needs of the healthcare job market in Iraq, as well as overseeing the program's accreditation through the partnership with the Central Technical University.

6. Program Structure

Program Structure	Number of Courses	Credit Units	Percentage	* Notes
Institutional Requirements	6	14	8%	
College Requirements	11	57	32%	
Department Requirements	39	109	60%	
Summer Internship	2		complete	
Other			100%	

7. Program Description

Year / Level	Course Code	Course Name	Credit Hours	
			Theoretical	Practical
First Semester	TU-ANE-101	Medical Physics 1	2	4
First Year/First Semester	TU-ANE-102	Anatomy 1	2	4
First Year/First Semester	TU-ANE-103	General Physiology 1	2	4
First Year/First Semester	TU-ANE-104	General Chemistry 1	2	4
First Year/First Semester	TU-ANE-105	Biology	2	4
First Year/First Semester	TU-ANE-106	Computer Principles	2	2
First Year / First Course	TU-ANE-107	Human Rights and Democracy	2	0
First Year/First Semester	TU-ANE-108	Medical Terminology 1	1	0
First Year/First Course	TU-ANE-109	Arabic 1	1	0
First Year / Second Semester	TU-ANE-111	Medical Physics 2	2	4
First Semester/Second Course	TU-ANE-112	Anatomy 2	2	4
First Year / Second Semester	TU-ANE-113	General Physiology 2	2	4
First Year / Second Semester	TU-ANE-114	Biochemistry	2	4

First Year / Second Semester	TU-ANE-115	Microbiology	2	4
First Year / Second Semester	TU-ANE-116	Medical Terminology 2	1	0
First Year / Second Semester	TU-ANE-117	Arabic 2	1	0
Second / First Course	TU-ANE-201	Fundamentals of Anesthesia 1	2	4
Second Year / First Semester	TU-ANE-202	Fundamentals of Anesthesia Machines 1	2	4
Second Year / First Semester	TU-ANE-203	Applied Physiology 1	2	4
Second Year / First Semester	TU-ANE-204	Fundamentals of Surgery 1	1	4
Second Year / First Semester	TU-ANE-205	Fundamentals of Internal Medicine 1	2	4
Second Year / First Semester	TU-ANE-206	Pharmacology 1	2	2
Second / First Semester	TU-ANE-207	Medical Terminology	2	0
Second / First Semester	TU-ANE-208	Computer Applications	1	2
Second Year / First Semester	TU-ANE-209	Crimes of the Ba'ath Regime in Iraq	2	0
Second / First Semester	TU-ANE-210	Arabic Language 1	1	0
Second Year / Second Semester	TU-ANE-221	Fundamentals of Anesthesia 2	2	4

Second Year / Second Semester	TU-ANE-222	Fundamentals of Anesthesia Machines 2	2	4
Second / Second Course	TU-ANE-223	Applied Physiology 2	2	4
Second Year / Second Semester	TU-ANE-224	Fundamentals of Surgery 2	1	4
Second / Second Semester	TU-ANE-225	Fundamentals of Internal Medicine 2	2	4
Second / Second Semester	TU-ANE-226	Pharmacology 2	2	2
Second / Second Semester	TU-ANE-227	Statistics	1	2
Second / Second Semester	TU-ANE-228	Arabic Language 2	1	0
Third / First Semester	TU-ANE-301	Anesthesia 1	2	5
Third Year / First Semester	TU-ANE-302	Fundamentals of Critical Care 1	2	4
Third Year / First Semester	TU-ANE-303	Anesthesia Machine Techniques 1	2	4
Third Year / First Semester	TU-ANE-304	Internal Medicine 1	2	4
Third Year / First Semester	TU-ANE-305	Surgery 1	1	3
Third Year / Second Semester	TU-ANE-321	Anesthesiology 2	2	5
Third Year / Second Semester	TU-ANE-322	Fundamentals of Critical Care 2	2	4

Third Year / Second Semester	TU-ANE-323	Anesthesia Machine Techniques 2	2	4
Third Year / Second Semester	TU-ANE-324	Internal Medicine 2	2	4
Third Year / Second Semester	TU-ANE-325	Surgery 2	1	3
Fourth / First Semester	TU-ANE-401	Advanced Anesthesia 1	2	5
Fourth / First Course	TU-ANE-402	Advanced Anesthesia Equipment Techniques 1	2	4
Fourth / First Semester	TU-ANE-403	Intensive Care Techniques 1	2	4
Part 4 / First Chorus	TU-ANE-404	Advanced Internal Medicine 1	2	3
Fourth Year / First Semester	TU-ANE-405	Pain Medicine	2	3
Fourth / First Semester	TU-ANE-406	Professional Ethics	2	0
Fourth Year / Second Semester	TU-ANE-421	Advanced Anesthesia 2	2	5
Fourth / Second Semester	TU-ANE-422	Advanced Anesthesia Equipment Techniques 2	2	4
Fourth / Second Semester	TU-ANE-423	Intensive Care Techniques 2	2	4
Fourth / Second Semester	TU-ANE-424	Advanced Internal Medicine 2	2	3

Fourth Year / Second Semester	TU-ANE-425	Emergency Medicine	2	3
Fourth / Second Semester	TU-ANE-426	Graduation Project	0	6

8. Expected Learning Outcomes for the Program

Knowledge

- | | |
|---|--|
| <ul style="list-style-type: none">- The student explains the basic scientific concepts related to the Department of Anesthesia and Critical Care- Distinguish between different anesthesia techniques and their clinical applications- Analyze the functions of the human body's systems, the impact of diseases on them, and how this affects the development of an appropriate anesthesia plan- Evaluates the benefits of medications used in anesthesia and understands the characteristics and clinical effects of each | <ul style="list-style-type: none">- Relate the results of laboratory and clinical tests to the needs of anesthetic care determines the expected risk associated with each medical condition before initiating anesthesia |
|---|--|

Skills

- | | |
|--|---|
| <ul style="list-style-type: none">- Applies practical skills to assess patients prior to anesthesia according to established standards.- Operates all medical anesthesia equipment with high efficiency and safety- Performs all technical procedures supporting the anesthesia and resuscitation of patients. | <ul style="list-style-type: none">- Monitors all vital signs and analyzes changes that occur during anesthesia.- Documents all procedures and information related to patient anesthesia in both the electronic and paper medical records |
|--|---|

Values

- | | |
|---|--|
| <ul style="list-style-type: none">- Adheres to professional ethics and scientific responsibility at all stages of work.- Fosters communication and teamwork skills within professional or academic teams.- Protects patient rights and the confidentiality of medical information- Assumes professional responsibility for carrying out the medical tasks assigned to them | <ul style="list-style-type: none">- Promotes a culture of quality medical services, patient safety, and infection prevention protocols in the workplace.- Participates in medical activities that serve the community and in awareness-raising initiatives. |
|---|--|

9. Teaching and Learning Strategies

The program relies on a variety of modern teaching and learning strategies that ensure the achievement of cognitive, skill-based, and behavioral learning outcomes, including the following:

1. Interactive Theoretical Lectures:

To clarify fundamental scientific concepts using modern teaching aids (smart boards, presentations, and educational videos).

2. Practical and Laboratory Education:

Applying theoretical concepts in practice within educational laboratories, clinics, or operating rooms, in accordance with the nature of the specialty (anatomy, anesthesia, medicine, surgery, chemistry, physiology, etc.).

3. Problem-Based Learning:

Presenting practical or clinical cases to stimulate critical thinking and link theoretical knowledge to real-world practice.

4. Workshops and Training Courses:

Enhancing students' technical and practical skills through specialized workshops on medical equipment or clinical skills.

5. Blended Learning:

Combining in-person instruction with online learning to facilitate access to academic content, especially during emergencies and crises.

6. Presentations and Class Discussions:

Developing students' communication and scientific presentation skills and encouraging active participation.

7. Clinical and Field Training:

Engaging students in real-world work environments (hospitals, laboratories, health centers) under direct academic supervision.

8. Use of Simulation:

To train students in critical situations and clinical procedures in a safe, realistic environment.

10. Assessment Methods

The program relies on a set of integrated assessment methods designed to measure students' theoretical knowledge, practical skills, and professional behavior, including the following:

1. **Daily and monthly theoretical and practical exams:** To continuously assess students' understanding of scientific concepts and applied skills.
2. **Student-led lectures (seminars):** To develop communication and scientific presentation skills and encourage active participation in the educational process.
3. **Organizing and participating in workshops:** to enhance practical and technical skills and link the practical aspect with the theoretical aspect.
4. **Adherence to professional standards and ethics:** To monitor students' discipline and professional conduct in classrooms, laboratories, and during field training.
5. **Continuous assessment:** through monitoring attendance, participation, classroom activities, and practical applications.
6. **Projects, reports, and research:** To develop research, analytical, and critical thinking skills.
7. **Final theoretical and practical exams:** To assess students' overall level and their achievement of the course objectives.

Professional Development

Orientation for New Faculty Members

New faculty members are mentored and prepared through:

1. Enrolling them in teaching methodology courses accredited by the Ministry of Higher Education and Scientific Research to ensure they possess the necessary pedagogical skills.
2. Completing a teaching competency course, which is a prerequisite for academic employment.
3. Familiarizing them with the regulations, laws, and guidelines of the university and the college, as well as administrative and academic procedures.
4. Involving them in academic meetings and activities to enhance their engagement with the university environment and interaction with the teaching staff.

Professional Development for Faculty Members

The professional development of faculty members is achieved through:

1. Enrolling faculty members in modern, advanced training courses and workshops related to their respective fields to enhance their academic and professional competence.
2. Organizing periodic development workshops in the areas of teaching methods, assessment techniques, quality assurance, and academic accreditation.
3. Encouraging participation in local and international scientific conferences and seminars to develop research capabilities.
4. Continuously updating knowledge by keeping abreast of developments in various scientific and technical disciplines.

12. Admission Criteria

- Admission to the college is through direct application in accordance with the Ministry of Higher Education and Scientific Research's regulations for private colleges.
- Admission is based on the competitive grade point average of students graduating from the science and biology tracks, within the college's annual admission plan, in accordance with the instructions of the Ministry's Private Education Department.
- One of the conditions for admission to the Department of Anesthesia Technology is that the student be physically fit to work in hospitals and stand in operating rooms for long periods of time. The student must also be free of any physical disability that would hinder the performance of their duties and must have normal senses (sight and hearing) and be free of chronic diseases that would prevent them from performing their medical duties. They are required to pass an official medical examination to confirm their physical and mental fitness for training and clinical work.

13.Key Sources of Information About the Program

Information regarding the academic program is based on a range of official and accredited scientific sources, including:

1. The Ministry of Higher Education and Scientific Research.
2. The Presidency of Al-Turath University.
3. The College of Health and Medical Sciences.
4. The program accreditation committee at the college.
5. The program accreditation committee in the academic department.
6. Corresponding departments at public colleges.
7. Textbooks, scientific references, and modern supplementary resources.

14. Program Development Plan

The program aims to develop students' scientific knowledge and skills by enabling them to acquire fundamental and specialized knowledge in their academic fields, and to apply and utilize this knowledge to serve their profession and society.

The development plan focuses on:

1. Updating the curriculum in line with modern scientific and technological developments.
2. Integrating theory and practice to enhance students' applied skills.
3. Developing students' scientific research and critical thinking skills.
4. Promoting the use of modern educational technologies in teaching and assessment.
5. Engaging students in academic and field activities that foster a spirit of innovation and professional responsibility.

Program skills chart

				Required Learning Outcomes of the Program											
Year / Level	Course Code	Course Name	Required or Elective	Knowledge				Skills				Values			
				A 1	A 2	A 3	A 4	B 1	B 2	B 3	B 4	C 1	C 2	C 3	C 4
2025–2026 First Stage First Course	TU-ANE-101	Medical Physics 1	Core			√			√	√					√
	TU-ANE-102	Anatomy 1	Basic	√		√			√						√
	TU-ANE-103	General Physiology 1	Basic	√	√			√			√				√
	TU-ANE-104	General Chemistry 1	Core	√		√		√							√
	TU-ANE-105	Biology	Basic	√		√		√			√				√
	TU-ANE-106	Computer Principles	Basic			√				√			√		√
	TU-ANE-107	Human Rights and Democracy	Core				√	√			√	√		√	
	TU-ANE-108	Medical Terminology 1	Basic	√											√
	TU-ANE-109	Arabic 1	Basic				√						√		√
2025–2026 First Stage Second Course	TU-ANE-111	Medical Physics 2	Core			√			√	√					√
	TU-ANE-112	Anatomy 2	Basic	√		√			√						√
	TU-ANE-113	General Physiology 2	Basic	√	√			√			√				√
	TU-ANE-114	Biochemistry	Undergraduate	√		√		√							√
	TU-ANE-115	Microbiology	Basic	√		√		√			√				√
	TU-ANE-116	Medical Terminology 2	Basic	√											√
	TU-ANE-117	Arabic 2	Basic				√						√		√

Program skills chart															
				Required Learning Outcomes of the Program											
Year / Level	Course Code	Course Name	Required or Elective	Knowledge				Skills				Values			
		A 1		A 2	A 3	A 4	B 1	B 2	B 3	B 4	C 1	C 2	C 3	C 4	
first second / 2025-2026 Second Stage First Course	TU-ANE-201	Fundamentals of Anesthesia 1	Core	√	√				√	√				√	√
	TU-ANE-202	Fundamentals of Anesthesia Equipment 1	Fundamentals	√	√				√	√				√	√
	TU-ANE-203	Applied Physiology 1	Basic		√	√		√							√
	TU-ANE-204	Fundamentals of Surgery 1	Core		√				√	√					√
	TU-ANE-205	Fundamentals of Internal Medicine 1	Core		√	√		√			√				√
	TU-ANE-206	Pharmacology 1	Core	√	√			√			√				√
	TU-ANE-207	Medical Terminology	Basic	√											√
	TU-ANE-208	Computer Applications	Basic			√				√			√		√
	TU-ANE-209	Crimes of the Ba'athist Regime in Iraq	Basic				√				√				√
	TU-ANE-210	Arabic 1	Basic				√						√		√
first second / 2025-2026 Second Stage Second Course	TU-ANE-221	Fundamentals of Anesthesia 2	Core	√	√				√	√				√	√
	TU-ANE-222	Fundamentals of Anesthesia Equipment 2	Core	√	√				√	√				√	√
	TU-ANE-223	Applied Physiology 2	Core		√	√		√							√
	TU-ANE-224	Fundamentals of Surgery 2	Core		√				√	√					√
	TU-ANE-225	Fundamentals of InternalMedicine 2	Core		√	√		√			√				√

	TU-ANE-226	Pharmacology 2	Core	√	√			√			√			√
	TU-ANE-227	Statistics 2	Basic			√					√			√
	TU-ANE-228	Arabic 2	Basic				√						√	√

Program skills chart															
				Required Learning Outcomes of the Program											
/ Year Level	Course Code	Course Name	Required or Elective	Knowledge				Skills				Values			
				A 1	A 2	A 3	A 4	B1	B2	B3	B 4	C 1	C 2	C 3	C 4
2025–2026 Stage 3 First Course	TU-ANE-301	Anesthesia 1	Core	√	√			√	√	√		√		√	√
	TU-ANE-302	Fundamentals of Intensive Care 1	Core	√	√			√	√				√	√	
	TU-ANE-303	Anesthesia Equipment Techniques 1	Basic	√	√			√	√			√		√	
	TU-ANE-304	Internal Medicine 1	Core		√				√	√					√
	TU-ANE-305	Surgery 1	Core		√	√		√			√				√
2025–2026 Phase 3 Second Course	TU-ANE-321	Anesthesia 2	Core	√	√			√	√	√		√		√	√
	TU-ANE-322	Fundamentals of Critical Care 2	Core	√	√			√	√				√	√	
	TU-ANE-323	Anesthesia Equipment Techniques 2	Basic	√	√			√	√			√		√	
	TU-ANE-324	Internal Medicine 2	Core		√				√	√					√
	TU-ANE-325	Surgery 2	Core		√	√		√			√				√

Program skills chart															
				Required Learning Outcomes of the Program											
/ Year Level	Course Code	Course Name	Required or Elective	Knowledge				Skills				Values			
				A 1	A 2	A 3	A 4	B 1	B 2	B 3	B 4	C 1	C 2	C 3	C 4
2025–2026 Stage 4 First Course	TU-ANE-401	Advanced Anesthesia 1	Core	√	√			√	√	√		√		√	√
	TU-ANE-402	Advanced Anesthesia Equipment Techniques 1	Core	√	√			√	√			√		√	
	TU-ANE-403	Intensive Care Techniques 1	Core	√	√			√	√				√	√	
	TU-ANE-404	Advanced Internal Medicine 1	Core		√				√	√					√
	TU-ANE-405	Pain Medicine	Basic	√	√			√	√				√		√
	TU-ANE-406	Professional Ethics	Core				√				√	√		√	
2025–2026 Stage 4 Second Course	TU-ANE-421	Advanced Anesthesia 2	Core	√	√			√	√	√		√		√	√
	TU-ANE-422	Advanced Anesthesia Equipment Techniques 2	Core	√	√			√	√			√		√	
	TU-ANE-423	Intensive Care Techniques 2	Core	√	√			√	√				√	√	
	TU-ANE-424	Advanced Internal Medicine 2	Core		√				√	√					√
	TU-ANE-425	Emergency Medicine	Core		√				√	√					√
	TU-ANE-426	Graduation Project	Core			√					√				√

First stage1

Course Description Template

1. Course Name	
Medical Physics 1	
2. Course Code	
TU-ANE-101	
3. Semester/Year	
first / 2025-2026	
4. Date of this description	
1 May, 2026	
5. Available formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
)4(units/90(hours (	
7. Name of Course Instructor	
Asst. Prof. Sinan Hassan Ali	
8. Course Objectives	
Course Objectives	By the end of the academic year, students will be able to: Identify the physical phenomena covered in the five chapters of the course and relate them to the medical phenomena students encounter in their professional practice. Such as blood flow, heart or brain wave monitoring devices, human body temperature, and pressure.

Specific Objectives	1.To be able to identify pressure, fluids, viscosity, and temperature. 2.Be able to identify the laws of gases, real and ideal gases, methods of heat transfer, and the laws of thermodynamics and electricity 3.Be able to understand the medical phenomena they observe in their professional practice, such as blood flow, the use of devices to measure heart or brain activity, human body temperature, and pressure.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards. 4.

10. Course Structure

Week	Hours	Required Learning Outcomes	Module or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical training	Understanding the Material	Physics of the Skeleton, Pressure	Theoretical lecture Practical laboratory application	Theoretical Tests (Quizzes) Practical Lab Tests
3–5	2 hours of theory 4 hours of practical work	Understanding the material	Energy, work, and power of the body	Theoretical lecture Practical laboratory application	Theoretical tests (quiz) Practical laboratory tests
6–7	2 hours of theory 4 hours practical	Understanding the material	Heat and cold in medicine.	Theoretical lecture Practical laboratory application	Theoretical exams (quiz) Practical laboratory tests
8–9	2 hours of theory 4 hours practical	Understanding the material	Specific heat, heat capacity, latent heat, thermometers and their types, heat transfer by conduction, convection, and radiation. Regulation of heat in the human body	Theoretical lecture Practical laboratory application	Theoretical Exams (quiz) Practical laboratory tests
10	2 hours of theory 4 hours of practical work	Understanding the material	Boyle's law, diffusion, and mixing of gases.	Theoretical lecture Practical laboratory application	Theoretical Tests (quiz) Practical laboratory experiments
11–13	2 hours of theory	Understanding the material	Physics of the lung and breathing.	Theoretical lecture	Theoretical exams

	4 hours practical			Practical laboratory application	(quiz) Practical laboratory exams
14–15	2 hours of theory 4 hours practical	Understanding the material	Evaporation of liquids, vapor pressure and boiling point, humidity, laminar and turbulent flow in liquids	Theoretical lecture Practical laboratory application	Theoretical exams (quiz) Practical laboratory exams

11.Course Assessment

The course is evaluated according to a rigorous system that ensures a fair and balanced assessment of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess general understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between the theoretical and practical components.

12.Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	Medical Physics – Cameron& Skofronick/ laser physics
Primary References (Sources)	Essentials of Medical Physics – Barry, ultrasound physics, infrared and thermal physics, bioelectrical physics
Recommended supplementary books and references (scientific journals, reports, etc.)	JOHN WILEY & SONS

Electronic References, Websites	All references related to medical physics that are relevant to anesthesia and intensive care
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Course Description Template

1. Course Title	
Anatomy 1	
4. Course Code	
TU-ANE-102	
5. Semester / Year	
first / 2025-2026	
6. Date of this description	
1 May, 2026	
7. Available formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
8. Number of Class Hours / Number of Units	
)90(hours / (4) units	
9. Name of Course Instructor (list all names if applicable)	
Dr. Hammam Essam Dr. Yahya Karim Hamoudi	
10. Course Objectives	
Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on

	curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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Course Structure .10

Week	Hours	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical training	Introduction, Anatomical Terms.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
2	2 hours of theory 4 hours of practical work	Body cavities and their organs.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
3	2 hours of theory 4 hours of practical work	Superficial anatomy of the human body.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical exams in the lab
4	2 hours of theory 4 hours of practical work	Human body tissues: types and characteristics.	Theoretical lecture Practical Lab Application	Theoretical Tests (Quizzes) Practical lab tests
5	2 hours of theory 4 hours of practical work	Skin anatomy and its functions; skin color.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	2 hours of theory 4 hours of practical work	General skeletal structure (skull and neck).	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical exams in the lab

7	2 hours of theory 4 hours of practical work	Vertebral column structure, anatomy, and function.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical exams in the lab
8	2 hours of theory 4 hours of practical work	Diaphragm and abdominal wall muscles.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
9	2 hours of theory 4 hours of practical work	Anatomy of the heart, heart walls, valves, and their functions	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical exams in the lab
10	2 hours of theory 4 hours of practical work	Structure of blood vessel walls: arteries, veins, and capillaries.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
11	2 hours of theory 4 hours of practical work	Lymphatic system – lymph glands.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12	2 hours of theory 4 hours of practical work	Respiratory system – upper respiratory tract.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
13	2 hours of theory 4 hours of practical work	Respiratory system—lower respiratory tract.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
14	2 hours of theory 4 hours of practical work	Alveoli, lungs, and pleural activity.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	2 hours of theory 4 hours of practical work	Upper and lower limbs	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical exams in the lab

12.Course evaluation

The course is evaluated according to a rigorous system that ensures a fair and balanced assessment of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

13.Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	Kenneth S.S. 2020 Anatomy and physiology the unity of form and function. McGraw Hill
Primary References (Sources)	<i>Tortara G.J. & derrickson B.H. 2018</i> <i>Gray's Anatomy for Students</i> <i>DrakeClinically Oriented Anatomy – Moore</i>
Recommended supplementary books and references (scientific journals, reports, etc.)	<i>Last's Anatomy: Regional and Applied, 11th</i>
Electronic references, websites	All references related to nursing that pertain to anesthesia and intensive care.

Course Description Template

1. Course Title	
General physiology 1	
2. Course Code	
TU-ANE-103	
3. Semester / Year	
first / 2025-2026	
4. Date of Preparation of This Description	
1 May, 2026	
5. Available formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
(120) / hours (2) units	
7. Name of Course Instructor	
Lec.Dr. Riyam Sajjad Ibrahim lec.Dr. Mona Barakat Abdul-Latif	
8. Course Objectives	
Course Objectives	General Objective: By the end of the academic year, students will be able to understand the functions of cells and various and perform various techniques for analyzing blood and other body fluids. Specific Objectives: Students will be able to: 1. Identify the principles of physiology and its relationship to other sciences. 2- Distinguish between the body's normal physiological state and a pathological state. 3. Use laboratory equipment and instruments. 4- Perform analyses of blood and other body fluids.
9. Teaching and Learning Strategies	

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Work to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Required Learning Outcomes	Module or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical training	Understanding the material	Definition of physiology; cell physiology; cell membrane components and structure.	Theoretical lecture Practical laboratory application	Theoretical quizzes Practical laboratory exams
2	2 hours of theory 4 hours of practical work	Understanding the material	Movement of fluids, solutes, and gases across the cell membrane.	Theoretical lecture Practical laboratory application	Theoretical quizzes Practical Lab Tests
3	2 hours of theory 4 hours of practical work	Understanding the material	Muscular system: types and characteristics.	Lecture Practical application in the lab	Theoretical quizzes Practical lab tests

4	2 hours of theory 4 hours of practical work	Understanding the material	Contraction mechanism, fatigue, muscle pain	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the material	Types of nerve cells, functions of nerve impulses, synapses, and reflexes	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	2 hours of theory 4 hours of practical work	Understanding the material	Action potential of nerve and muscle fibers.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
7	2 hours of theory 4 hours of practical work	Understanding the material	Blood; functions, components, plasma, and serum	Theoretical lecture Practical application in the laboratory	Theoretical quizzes Practical Lab Tests
8	2 hours of theory 4 hours of practical work	Understanding the material	Red blood cells, shape, origin, Hb structure, and anemia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
9	2 hours of theory 4 hours of practical work	Understanding the material	W.B.Cs, platelets; functions, origin, structure	Lecture Practical laboratory application	Theoretical quizzes Practical Lab Tests
10	2 hours of theory 4 hours of practical work	Understanding the material	Blood clotting mechanism	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical laboratory tests

11	2 hours of theory 4 hours of practical training	Understanding the subject matter	Cardiovascular system, heart valve cycle, cardiac conduction system.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
12	2 hours of theory 4 hours of practical work	Understanding the material	Heart sounds and murmurs, ECG	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Exams
13	2 hours of theory 4 hours of practical work	Understanding the material	Blood pressure	Theoretical Lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
14	2 hours of theory 4 hours of practical work	Understanding the material	Respiratory system, pleura, types of respiratory mechanisms.	Theoretical Lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
15	2 hours of theory 4 hours of practical work	Understanding the material	Oxygen Transport and Exchange	Theoretical Lecture Practical application in the lab	Theoretical quizzes Practical Lab Assessments

11. Course Assessment

The course is evaluated according to a rigorous system that ensures a fair and balanced assessment of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through short exams, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall

understanding of the material.

- Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

13. Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	Koeppen, B. M., & Stanton, B. A. (2024). Berne and Levy Physiology E-Book: Berne and Levy Physiology E-Book. Elsevier Health Sciences.
Primary References (Sources)	HALL, John E.; HALL, Michael E. (2021). Guyton and Hall textbook of medical physiology e-Book. Elsevier Health Sciences. Costanzo, L. (2021). Costanzo Physiology E-Book: Costanzo Physiology E-Book. Elsevier Health Sciences.
Recommended supplementary books and references (scientific journals, reports, etc.)	Khurana, I., & Khurana, A. (2020). Medical Physiology for Undergraduate Students, 2nd Updated Edition, eBook. Elsevier Health Sciences. Pal, G. K., & Pal, P. (2019). Comprehensive Textbook of Medical Physiology 2 Volumes. Jaypee Brothers Medical Publishers. 6. Sembulingam, K. (2019). Essentials of Medical Physiology: With Free Review of Medical Physiology. Jaypee Brothers Medical Publishers

Electronic References, Websites	All references related to general physiology that are relevant to anesthesia and intensive care
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Course Description Template

1. Course Title	
General Chemistry	
2. Course Code	
TU-ANE-104	
3. Semester / Year	
first / 2025-2026	
4. Date of this description	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and integrated e-learning platforms.	
6. Number of Class Hours / Number of Units	
90))) / hours 4units (	
7. Name of Course Instructor	
Prof. Hussein Hassan Kharnoub Assist.lec. Essam Shaker Hamza	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: By the end of the current academic year, students will be able to: - Perform various techniques of qualitative and quantitative analysis of components in human blood and other body fluids in both healthy and diseased states. Specific Objectives: By the end of the academic year, students will be able to: 1. Understand the basic principles of biochemistry and their applications. 2- Relate diseases to abnormal changes in blood components and other body fluids. 3- Collect and process biological samples. 4- Use and maintain the necessary equipment and instruments. 5- Assess the components of blood and other body fluids both qualitatively and quantitatively. 6- Be able to work safely in laboratories.

9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Work to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10. Course Structure

Week	Hours	Required Learning Outcomes	Module or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical training	Understanding the Material	Scope of biochemistry in health and disease, cells and cell constituents.	Lecture Practical laboratory application	Theoretical quizzes Practical laboratory exams
2	2 hours of theory 4 hours of practical work	Understanding the material	Some aspects of physical chemistry, gas laws, Boyle's law, Graham's law of diffusion, Dalton's law of partial pressure, the general gas equation, and the International System of Units.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
3	2 hours of theory 4 hours of practical work	Understanding the material	Radioactivity and radioactive isotopes.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical laboratory tests

4	2 hours of theory 4 hours of practical work	Understanding the material	Solutions and methods for expressing concentrations in colloidal solutions.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical laboratory tests
5	2 hours of theory 4 hours of practical work	Understanding the material	The pH concept, acid-base balance, chemical equilibrium, common-ion effect.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	2 hours of theory 4 hours of practical work	Understanding the material	Buffers and buffer systems of physiological importance in living systems.	Theoretical lecture and practical application in the laboratory	Theoretical Tests (Quizzes) Practical Lab Tests
7	2 hours of theory 4 hours of practical work	Understanding the material	Blood, blood constituents, body fluids, regulation of blood pH and body fluids.	Theoretical lecture Practical application in the laboratory	Theoretical quizzes Practical laboratory tests
8	2 hours of theory 4 hours of practical work	Understanding the material	Water and electrolyte balance – osmotic pressure of body fluids, regulation of total electrolytes and body fluids.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical laboratory tests
9	2 hours of theory 4 hours of practical work	Understanding the material	Carbohydrate classification reactions; major carbohydrates in the human body.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10	2 hours of theory 4 hours of practical work	Understanding the material	Metabolism of carbohydrates, blood glucose, and factors controlling blood glucose levels.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical laboratory tests
11	2 hours of theory	Understanding the material	Glucose abnormalities, diabetes mellitus, ketosis, glycosuria, glucose tolerance curve.	Theoretical lecture Practical	Theoretical quizzes

	4 hours of practical work			application in the lab	Practical laboratory tests
12	2 hours of theory 4 hours of practical work	Understanding the material	Lipids, classification, derived lipids, compounds, lipids.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
13	2 hours of theory 4 hours of practical work	Understanding the material	Lipid metabolism, lipid abnormalities.	Lecture and hands-on lab work	Theoretical quizzes Practical lab tests
14	2 hours of theory 4 hours of practical work	Understanding the material	Proteins, classification, functions, peptide bonds, amino acids, chemical reactions.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
15	2 hours of theory 4 hours of practical work	Understanding the material	Nucleic acids and their expression, DNA replication, transcription, and RNA topology.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Exams

11.Course Evaluation

The course is evaluated according to a rigorous system that ensures a fair and balanced assessment of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through short exams, assignments, and class participation.
 - Practical: 15% – through ongoing assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	Lippincott's Illustrated Reviews: Biochemistry Fifth Edition Richard Harvey Denise Ferrier
Primary References (Sources)	ESSENTIALS OF BIOCHEMISTRY Pankaja Naik PhD Professor and Head Department of Biochemistry MVPS Dr Vasant Rao Pawar Medical College Nashik, Maharashtra
Recommended Supplementary Books and References (Scientific Journals, Reports, etc.)	General Chemistry – Ebbing
Electronic References, Websites	Scientific books available at the University of Al-Turath Library

Course Description Template

1. Course Title	
Biology	
2. Course Code	
TU-ANE-105	
3. Semester / Year	
first / 2025-2026	
4. Date of this description	
1 May, 2025	
5. Available formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
90))hours) /4(units	
7. Name of Course Instructor	
Assist.lec. Mustafa Haitham Jamil	
8. Course Objectives	
Course Objectives	General Objectives: By the end of the academic year, students will be able to: identify and describe the structure of a cell; describe bacteria and parasites; and explain the cell's immune mechanisms against pathogenic organisms. Specific Objectives: Students will be able to: 1. Identify the parts and components of a cell. 2. Identify types of bacteria, parasites, and fungi. 3. Understand the cell's immune mechanisms against pathogenic organisms.
9. Teaching and Learning Strategies	

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Required Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical training	Understanding cell topics and types	Introduction to biology, cells, prokaryotic and eukaryotic cells, animal and plant cells	Lecture and hands-on lab work	Theoretical quizzes Practical lab exams
2–3	2 hours of theory 4 hours of practical work	Understanding the structure, shape, and size of cells	The Structure, Types, Shape, and Size of Cells	Lecture and hands-on lab work	Theoretical quizzes Practical lab exams
4–5	2 hours of theory 4 hours of practical work	Understanding the movement of substances into and out of cells	Movement in and out of cells: diffusion, osmosis, active transport.	Theoretical lecture and practical laboratory application	Theoretical quizzes Practical lab tests
6	2 hours of theory	Understanding Cell Division	Cell Division: Amitosis, Mitosis, and Meiosis	Theoretical lecture Practical	Theoretical quizzes

	4 hours of practical work			application in the lab	Practical lab exams
7–8	2 hours of theory 4 hours of practical work	Understanding acids, amino acids, and nucleic acids	Nucleic acids: DNA and RNA, DNA replication	Lecture and hands-on lab work	Theoretical quizzes Practical lab exams
9	2 hours of theory 4 hours of practical work	Understanding Protein Synthesis	Protein biosynthesis	Lecture and hands-on lab work	Theoretical quizzes Practical lab exams
10–11	2 hours of theory 4 hours of practical work	Understanding the material	Human body tissues: Epithelial tissues	Lecture Practical application in the lab	Theoretical quizzes Practical laboratory exams
12–13	2 hours of theory 4 hours of practical work	Understanding the material	Muscular and Nervous Tissues	Lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
14	2 hours of theory 4 hours of practical work	Understanding the material	Connective Tissues: Bone and Cartilage	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
15	2 hours of theory 4 hours of practical work	Understanding the material	Blood (RBCs and WBCs) and lymph	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical laboratory tests

11.Course Assessment

The course is evaluated according to a rigorous system that ensures a fair and balanced assessment of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through short exams, assignments, and class participation.
 - Practical: 15% – through ongoing assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	Medical Microbiology" (10th Edition, 2023) Lippincott's Illustrated Reviews: Microbiology 2024
Primary References (Sources)	"Jawetz, Melnick & Adelberg's Medical Microbiology" (29th Edition, 2022) "Clinical Microbiology Made Ridiculously Simple" (8th Edition, 2023)
Recommended supplementary books and references (scientific journals, reports, etc.)	Review of Medical Microbiology and Immunology 2024
Electronic references, websites	All biology-related references relevant to anesthesia and intensive care

Course Description Template

1. Course Title	
Principles of Computing	
2. Course Code	
TU-ANE-106	
3. Semester / Year	
first / 2025-2026	
4. Date of this Description	
1 May, 2026	
5. Available formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
60))hours/ (2) units	
7. Name of Course Instructor	
Assist.lec. Sahar Ali	
8. Course Objectives	
Course Objectives	General Objective :Course Objectives To equip students with the skills to use basic office applications, create office files and documents, use the operating system, and understand the fundamentals of working in a digital environment. Specific Objectives: Students will be able to: Equip students with the knowledge to manage and use various computer applications.

9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10. Course Structure

Week	Hours	Required Learning Outcomes	Module or Topic Name	Learning Method	Assessment Method
1	2 hour of theory 2 practical hours	Understanding the Material	Computer Fundamentals Computer Concepts, Stages of the Computer Life Cycle, Evolution of Computer Generations	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Exams
2	2 hour of theory 2 practical hours	Understanding the Material	Advantages of Computers and Their Applications; Classification of Computers by Purpose, Size, and Data Type	Theoretical Lecture and Practical Lab Application	Theoretical quizzes Practical Lab Exams
3	2 hour of theory 2 hours of practical work	Understanding the material	Computer Components	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Exams

4	2 hour of theory 2 hours of practical work	Understanding the Material	Computer Components: The physical parts of a computer and software entities	Theoretical Lecture Practical Application in the Lab	Theoretical quizzes Practical Lab Tests
5	2 hour of theory 2 hours of practical work	Understanding the material	Your Personal Computer: Computer Security Concepts and Software Licenses	Theoretical Lecture Practical Application in the Lab	Theoretical quizzes Practical Lab Exams
6	2 hour of theory 2 practical hours	Understanding the material	Computer Security and Software Licenses	Theoretical Lecture Practical Application in the Lab	Theoretical quizzes Practical lab exams
7	2 hour of theory 2 practical hours	Understanding the material	Computer Safety & Software Licenses	Theoretical Lecture Practical Application in the Lab	Theoretical quizzes Practical Lab Exams
8	2 hour of theory 2 practical hours	Understanding the material	Cyber Ethics, Types of Violations, Computer Security, Computer Privacy	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
9	2 hour of theory 2 practical hours	Understanding the Material	Computer software licenses and their types, intellectual property, cyberattacks, malware, key steps to protect against cyberattacks, and the health risks posed by computers	Theoretical lecture and hands-on lab work	Theoretical quizzes Practical lab exams
10	2 hour of theory 2 practical hours	Understanding the Material	Operating Systems Definition of an operating system, functions, objectives, classification, and examples of some operating systems	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
11	2 hour of theory	Understanding the Material	Operating Systems: Windows 7	Theoretical Lecture Practical	Theoretical quizzes Practical Lab Exams

	2 practical hours			Application in the Lab	
12	2 hour of theory 2 practical hours	Understanding the material	Desktop Components: Start Menu, Taskbar	Theoretical Lecture Practical Application in the Lab	Theoretical quizzes Practical Lab Tests
13	2 hour of theory 2 practical hours	Understanding the material	Folders, Files, and Icons	Lecture, Theory, and Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
14	2 hour of theory 2 practical hours	Understanding the material	Performing operations on windows and desktop backgrounds	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
15	2 hour of theory 2 practical hours	Understanding the material	Control Panel Windows Control Panel Panel Categories	Theoretical Lecture Practical Application in the Lab	Theoretical quizzes Practical Lab Tests

11.Course Evaluation

The course is evaluated according to a rigorous system that ensures a fair and balanced assessment of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through short exams, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.

- Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	Graham brown, david Watson, cambridge IGCSE information and communication technology 3 rd edition 2020
Primary References (Sources)	Alan Evans kendall martin, marray anne poasty technology in action complete 16 th edition 2020
Recommended supplementary books and references (scientific journals, reports, etc.)	Ahmed banafa introduction to AI 1 st edition 2024
Electronic references, websites	All computer-related references relevant to anesthesia and intensive care

Course Description Template

1. Course Title	
Human rights and democracy	
2. Course Code	
TU-ANE-107	
3. Semester / Year	
first / 2025-2026	
4. Date of Preparation of This Description	
1 May, 2026	
5. Available formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
30)) hours (2) / unit	
7. Name of Course Instructor	
Lec.Dr. Shahd Basem Mohammed	
8. Course Objectives	
Course Objectives	:Course Objectives Students will be able to identify the roots, suffixes, prefixes, and endings of medical terms.

9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update vocabulary and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new vocabulary not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments in other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning; encourage scientific research; and collaborate with universities and international scientific institutions to modernize teaching and assessment methods in line with international standards.
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory	Understanding the subject	The concept of human rights	Theoretical Lecture	Theoretical quizzes
2	2 hours of theory	Understanding the subject	Key characteristics of human rights	Theoretical Lecture	Theoretical quizzes
3	2 hours of theory	Understanding the subject	Types of human rights	Theoretical Lecture	Theoretical quizzes
4	2 hours of theory	Understanding the subject	Categories of human rights	Theoretical Lecture	Theoretical quizzes

5	2 hours of theory	Understanding the subject	Human rights in ancient civilizations	Theoretical Lecture	Theoretical quizzes
6	2 hours of theory	Understanding the subject	Human rights in the Middle Ages	Theoretical Lecture	Theoretical quizzes
7	2 hours of theory	Understanding the subject	Human rights in Islam and other Abrahamic religions	Theoretical Lecture	Theoretical quizzes
8	2 hours of theory	Understanding the subject	Human rights in Renaissance societies	Theoretical Lecture	Theoretical quizzes
9	2 hours of theory	Understanding the subject	Human rights in modern times	Theoretical Lecture	Theoretical quizzes
10	2 hours of theory	Understanding the subject	Human rights in modern times	Theoretical Lecture	Theoretical quizzes
11	2 hours of theory	Understanding the subject	NGOs and human rights.	Theoretical Lecture	Theoretical quizzes
12	2 hours of theory	Understanding the subject	Guarantees for respecting and protecting human rights at the national and international levels	Theoretical Lecture	Theoretical quizzes
13	2 hours of theory	Understanding the subject	Water and environmental awareness in Iraq	Theoretical Lecture	Theoretical quizzes
14	2 hours of theory	Understanding the subject	Water and environmental awareness in Iraq	Theoretical Lecture	Theoretical quizzes
15	2 hours of theory	Understanding the subject	The concept of equality	Theoretical Lecture	Theoretical quizzes
11.Course Assessment					

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (30%), which includes:
 - Theoretical: 30% – through quizzes, assignments, and class participation.
- Final Grade (70%), which includes:
 - Theoretical: 70% – through a final written exam to assess overall understanding of the material..

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	The Language of Medicine – Chabner
Primary References (Sources)	Medical Terminology: An Illustrated Guide – Cohen
Recommended supplementary books and references (scholarly journals, reports, etc.)	Medical Terminology Systems – Gylys
Electronic References, Websites	websites

Course Description Template

13. Course Title	
Medical Terminology1	
14. Course Code	
TU-ANE-108	
15. Semester / Year	
first / 2025-2026	
16.Date of Preparation of This Description	
1 May, 2026	
17. Available formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
18.Number of Class Hours / Number of Units	
)15) hours (1) / unit	
19.Name of Course Instructor	
Lec.Dr. Shahd Basem Mohammed	
20. Course Objectives	
Course Objectives	:Course Objectives Students will be able to identify the roots, suffixes, prefixes, and endings of medical terms.

21. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 4. Short-term planning: Working to update vocabulary and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new vocabulary not exceeding 20% of the content of compatible curricula. 5. Medium-Term Planning: Establishing academic partnerships with corresponding departments in other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 6. Long-Term Planning: Develop an integrated learning environment based on blended learning; encourage scientific research; and collaborate with universities and international scientific institutions to modernize teaching and assessment methods in line with international standards.
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22. Course Structure

Week	Hours	Required Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	1 hours of theory	Understanding medical terminology specific to these units	Introduction – structural analysis – basic rules of medical word formation Major suffixes, suffixes denoting a state or condition	Theoretical Lecture	Theoretical quizzes
2	1 hours of theory	Understanding medical terminology specific to these units	Major suffixes, suffixes denoting medical actions Prefixes—prefixes for numbers and measurements	Theoretical Lecture	Theoretical quizzes
3	1 hours of theory	Understanding medical terminology specific to these units	Prefixes – prefixes of color Prefixes – prefixes of directions and position	Theoretical Lecture	Theoretical quizzes

4	1 hours of theory	Understanding medical terminology related to these units	Prefixes – prefixes Of size, time, and place Prefixes – prefixes of negation	Theoretical Lecture	Theoretical quizzes
5	1 hours of theory	Understanding the medical terminology specific to these units	Prefixes – prefixes of types Roots	Theoretical Lecture	Theoretical quizzes
6	1 hours of theory	Understanding medical terminology specific to these units	Word terminals, conditions	Theoretical Lecture	Theoretical quizzes
7	1 hours of theory	Understanding the medical terminology specific to these units	The body as a whole. Skin and its appendages	Theoretical Lecture	Theoretical quizzes
8	1 hours of theory	Understanding the medical terminology specific to these units	Gastrointestinal tract. Respiratory system	Theoretical Lecture	Theoretical quizzes
9	1 hours of theory	Understanding medical terminology specific to these units	Cardiovascular system. Blood and lymphatic system.	Theoretical Lecture	Theoretical quizzes
10	1 hours of theory	Understanding medical terminology specific to these units	Musculoskeletal system. Urogenital system.	Theoretical Lecture	Theoretical quizzes
11	1 hours of theory	Understanding the medical terminology specific to these units	Endocrine system	Theoretical Lecture	Theoretical quizzes
12	1 hours of theory	Understanding the medical terminology specific to these units	Nervous system	Theoretical Lecture	Theoretical quizzes

13	1 hours of theory	Understanding the medical terminology specific to these units	Special Senses	Theoretical Lecture	Theoretical quizzes
14	1 hours of theory	Understanding the medical terminology specific to these units	Oncology	Theoretical Lecture	Theoretical quizzes
15	1 hours of theory	Understanding the medical terminology specific to these units	Special related terms	Theoretical Lecture	Theoretical quizzes

23.Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:
Semester Grade (30%), which includes:

- Theoretical: 30% – through quizzes, assignments, and class participation.

Final Grade (70%), which includes:

- Theoretical: 70% – through a final written exam to assess overall understanding of the material..

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

24. Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	The Language of Medicine – Chabner
Primary References (Sources)	Medical Terminology: An Illustrated Guide – Cohen
Recommended supplementary books and references (scholarly journals, reports, etc.)	Medical Terminology Systems – Gylys
Electronic References, Websites	All references related to the Arabic language that are relevant to anesthesia and intensive care

Course Description Template

1. Course Title	
Arabic 1	
2. Course Code	
TU-ANE-109	
3. Semester / Academic Year	
first / 2025-2026	
4. Date of Preparation of This Description	
1 May, 2026	
5. Available formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
)15) hours/ (1) unit	
7. Name of Course Instructor	
Prof. Hussein Hassan Kharnoub Assist. Prof. Sinan Hassan Ali	
8. Course Objectives	
Course Objectives	Course Objectives • General Objective: Students will become familiar with grammatical and rhetorical expression. • Specific Objective: Students will learn about linguistic information and corrections in accordance with the rules of the Arabic language.
9. Teaching and Learning Strategies	

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update vocabulary and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new vocabulary not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Required Learning Outcomes	Module or Topic Name	Learning Method	Assessment Method
1–2	1 hours of theory	Understanding the topic, enabling students to identify linguistic errors	Introduction to linguistic errors—the tied “ta,” the long “ta,” and the open “ta”	Lectures in classrooms	Theory Tests (quiz)
3	1 hours of theory	Understanding the Topic	Rules for writing long and short vowels – solar and lunar letters	Lectures in classrooms	Theory Tests (quiz)
4	1 hours of theory	Understanding the topic, which enables students to learn the basics of the letters “zad” and “zād”	"Ad" and "Thad"	Lectures in classrooms	Theoretical exams (quiz)
5	1 hours of theory	Understanding the topic that enables the student to write the hamza	Writing the hamza	Lectures in classrooms	Theory tests (quiz)
6	1 hours of theory	Understanding the topic that enables	Punctuation	Lectures in classrooms	Theoretical tests (quiz)

		students to identify punctuation marks			
7	1 hours of theory	Understanding the topic, enabling students to identify nouns and verbs and distinguish between them	Nouns and verbs, and how to distinguish between them	Lectures in classrooms	Theory tests)quiz)
8	1 hours of theory	Understanding the topic	Effects	Lectures in classrooms	Theory Quizzes)quiz)
9	1 hours of theory	Understanding the subject	Number	Lectures in classrooms	Theory Quizzes)quiz)
10	1 hours of theory	Understanding the subject matter, enabling students to identify linguistic errors	Common linguistic errors	Lectures in classrooms	Theoretical tests)quiz)
11	1 hours of theory	Understanding the topic, which enables students to identify prepositions and understand their meanings	The nun and the two nuns – meanings of prepositions	Lectures in Classrooms	Theory Exams)quizzes)
12	1 hours of theory	Understanding the subject matter, enabling students to identify the formal aspects of administrative discourse	Formal aspects of administrative writing	Lectures in classrooms	Theoretical exams)quiz)
13	1 hours of theory	Understanding the subject matter, enabling students to write an administrative letter	Language of Administrative Letters	Lectures in classrooms	Theoretical exams)quiz)
14–15	1 hours of theory	Understanding the subject matter, enabling students to write administrative correspondence	Examples of administrative correspondence	Lectures in classrooms	Theoretical exams)quiz)

11.Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

Semester Grade (30%), which includes:

- Theoretical: 30% – through quizzes, assignments, and class participation.

Final Grade (70%), which includes:

- Theoretical: 70% – through a final written exam to assess overall understanding of the material..

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects. This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	Arabic Grammar by Muhammad Thiab
Primary References (Sources)	Comprehensive Collection of Arabic Lessons – Mustafa Al-Ghalayini.
Recommended supplementary books and references (scholarly journals, reports, etc.)	Comprehensive Grammar – Abbas Hassan.
Electronic References, Websites	All references related to the Arabic language that are relevant to anesthesia and intensive care

Course Description Template

1. Course Title	
Medical Physics 2	
2. Course Code	
TU-ANE-111	
3. Semester / Year	
second / 2025-2026	
4. Date of this description	
1 May, 2026	
5. Available formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
(90) / hours (4)units	
7. Name of Course Instructor	
Assist.Prof. Sinan Hassan Ali	
8. Course Objectives	
Course Objectives	:Course Objectives By the end of the academic year, students will be able to: Identify the physical phenomena covered in the five chapters of the course and relate them to the medical phenomena students encounter in their professional practice. Such as blood flow, devices that measure the heart rate or brain activity, body temperature, and blood pressure. Specific Objectives: The student should be able to: 1. Identify pressure, fluids, viscosity, and heat. 2. To be able to identify the laws of gases, real and ideal gases, methods of heat transfer, and the laws of thermodynamics and electricity. 3. Understand the medical phenomena they observe in their professional practice, such as blood flow and the use of devices to measure heart rate, brain activity, and body temperature.

9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Required Learning Outcomes	Module or Topic Name	Learning Method	Assessment Method
1-3	2 hours of theory 4 hours of practical training	Understanding the subject	Physics of the cardiovascular system. Introduction to Biosafety and Security Key components of biorisk management Safety components in all laboratories Universal safety precautions	Theoretical Lecture and Practical Application in the Laboratory	Theoretical quizzes Practical laboratory tests
4	2 hours of theory 4 hours of practical work	Understanding the subject	Lasers in medicine. Biosafety barriers in laboratories Personal protective equipment (PPE) Facility Design	Theoretical Lecture Practical Application in the Laboratory	Theoretical quizzes Practical lab tests

5	2 hours of theory 4 hours of practical work	Understanding the subject	Electricity within the body. Biosafety Level Risk Assessment Strategy Hazard groups, biosafety levels, practices, and equipment Standard practices required in biology laboratories	Theoretical lecture and practical application in the laboratory	Theoretical quizzes Practical lab exams
6	2 hours of theory 4 hours of practical work	Understanding the subject	Application of electricity and magnetism in medicine. Biological Agents Routes of infection Basis for Control Measures Hazard Group Classification System A Biosafety Cabinet (BSC)	Theoretical lecture and practical laboratory application	Theoretical tests (quizzes) Practical laboratory tests
7	2 hours of theory 4 hours of practical work	Understanding the subject	Light in medicine, sound in medicine. Biorisk and biohazards Control of substances hazardous to health Assessing risks associated with working with human blood and tissues Control measures for work with human blood and tissues Containment level	Theoretical lecture and practical laboratory application	Theoretical tests (quizzes) Practical laboratory tests
8	2 hours of theory 4 hours of hands-on training	Understanding the subject	Physics of nuclear medicine, radiotherapy, and radiation protection.	Theoretical lecture and practical laboratory application	Theoretical quizzes Practical lab exams
9	2 hours of theory 4 hours of practical work	Understanding the subject	Solar Energy Technology Availability of solar radiation Photovoltaic devices Dye-sensitized solar cells Photoelectrochemical cells for hydrogen production	Theoretical lecture and practical laboratory application	Theoretical quizzes Practical laboratory tests
10	2 hours of theory	Understanding the subject	Nanotechnology in Renewable Energy Systems Nanotechnology-enabled renewable energy technologies	Theoretical lecture Practical	Theoretical quizzes

	4 hours of practical work		Energy transport, conversion, and storage—nano-, micro-, and meso-scale phenomena and devices.	application in the lab	Practical laboratory tests
11	2 hours of theory 4 hours of practical work	Understanding the subject	Energy sector products using nanomaterials Light-emitting diodes Batteries Catalytic reactors Capacitors, Supercapacitors	Theoretical lecture and practical lab application	Theoretical quizzes Practical lab tests
12–13	2 hours of theory 4 hours of practical work	Understanding the subject	Nanotechnology for Hydrogen Production Photocatalytic Water Splitting Reaction Nano Semiconductor Materials for Photocatalytic Water Splitting Photolytic H₂ Evolution Based on Nano-Enhanced Materials	Theoretical Lecture and Practical Laboratory Application	Theoretical Quizzes Practical Laboratory Tests
14	2 hours of theory 4 hours of practical work	Understanding the subject	Nanomaterials for the Conversion of Carbon Dioxide into Renewable Fuels and Value-Added Products Theoretical Potentials for the Electrochemical Reduction of CO₂ Effect of Particle Size on Electrode Performance in the Electrochemical CO₂ Reduction Reaction	Theoretical Lecture Practical Laboratory Application	Theoretical Quizzes Practical Laboratory Tests
15	2 hours of theory 4 hours of practical work	Understanding the subject	Nanomaterials and Direct Air Capture of CO₂ Capture or Separation Technologies New Approaches to CO₂ Capture: Direct Air Capture and Nanomaterials	Theoretical Lecture Practical Laboratory Application	Theoretical Tests (Quiz) Practical Laboratory Tests

11. Course Evaluation

The course is evaluated according to a rigorous system that ensures a fair and balanced assessment of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.

- Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	Medical Physics – Cameron & Skofronick/ laser physics
Primary References (Sources)	Essentials of Medical Physics – Barry, ultrasound physics, infrared and thermal physics, bioelectrical physics
Recommended supplementary books and references (scientific journals, reports, etc.)	JOHN WILEY & SONS
Electronic References, Websites	All references related to medical physics that are relevant to anesthesia and intensive care

Course Description Template

1.	2. Course Title	
	Anatomy 2	
3.	4. Course Code	
	TU-ANE-112	
5.	6. Semester / Academic Year	
	Second 2025/2026	
7.	8. Date of this description	
	1 May, 2026	
9.	10. Available formats	
	Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
11.	12. Number of Class Hours / Number of Units	
	)90(hours) / 4(units	
13.	14. Name of Course Instructor (list all names if applicable)	
	Lec. Dr. Hammam Essam lec. Dr. Yahya Karim Hamoudi	
15.	16. Course Objectives	
	Course Objectives	:Course Objectives General Objective: To familiarize students with the body's organs and tissues. Specific Objectives: 1. Identify the parts that make up each organ. 2. To identify the tissues that make up each organ. 3. Identify the specific functions of the organ and tissues.

17.	18. Teaching and Learning Strategies				
	Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.			
19.	20.Course Structure				
Week	Hours	Required Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical training	Understanding the subject	CNS Structure and Functions	Theoretical lecture and practical application in the laboratory	Theoretical Tests (Quizzes) Practical Lab Tests

2	2 hours of theory 4 hours of practical training	Understanding the subject	PNS (spinal nerves)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
3	2 hours of theory 4 hours of practical training	Understanding the subject	Sensory and motor nervous systems	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical training	Understanding the subject	GIT system; parts and structure of the wall and stomach.	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical exams in the lab
5	2 hours of theory 4 hours of practical training	Understanding the subject	Salivary gland structure, pancreas, and gallbladder.	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical lab exams
6	2 hours of theory 4 hours of practical training	Understanding the subject	Liver Anatomy, Structure, and Functions	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical lab exams
7	2 hours of theory 4 hours of practical training	Understanding the subject	Urinary system: kidney, ureter, urinary bladder, urethra	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical lab exams
8	2 hours of theory 4 hours of practical training	Understanding the subject	Muscular system.	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical lab tests
9	2 hours of theory	Understanding the subject	Reproductive system – male genitalia.	Theoretical lecture and practical	Theoretical quizzes Practical lab tests

	4 hours of practical training			application in the lab	
10	2 hours of theory 4 hours of practical training	Understanding the subject	Female reproductive organs.	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical lab exams
11	2 hours of theory 4 hours of practical training	Understanding the subject	Endocrine glands— anatomy and function.	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical lab exams
12	2 hours of theory 4 hours of practical training	Understanding the subject	Endocrine glands— anatomy and function.	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical lab exams
13	2 hours of theory 4 hours of practical training	Understanding the subject	Special sense anatomy.	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical lab exams
14	2 hours of theory 4 hours of practical training	Understanding the subject	Anatomy of the skeletal system.	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical lab exams
15	2 hours of theory 4 hours of practical training	Understanding the subject	Development and Inheritance.	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical lab exams

21.	22.Course Assessment: Theoretical lecture and practical laboratory application	
	The course is evaluated according to a rigorous system that ensures a fair and balanced assessment of students' academic achievement and skills, as follows: • Semester Grade (40%), which includes: • Theoretical: 25% – through short exams, assignments, and class participation. • Practical: 15% – through continuous assessment of performance in the lab or practical application. • Final Grade (60%), which includes: • Theoretical: 35% – through a final written exam to assess general understanding of the material. • Practical: 25% – through a practical or clinical exam to assess applied proficiency. This system is applied to both semesters to ensure consistency in assessment between the theoretical and practical components.	
23.	24. Learning and Teaching Resources	
	Required Textbooks (Syllabus, if available)	Kenneth S.S. 2020 Anatomy and physiology the unity of form and function. McGraw Hill
	Primary References (Sources)	<i>Tortara G.J. & derrickson B.H.</i> 2018 <i>Gray's Anatomy for Students</i> <i>Clinically Oriented Drake</i> <i>Anatomy – Moore</i>
	Recommended supplementary books and references (scientific journals, reports, etc.)	<i>Last's Anatomy: Regional and Applied, 11th</i>
	Electronic references, websites	All references related to anatomy that pertain to anesthesia and intensive care.

Course Description Template

1. Course Title	
General Physiology 2	
2. Course Code	
TU-ANE-113	
3. Semester / Year	
second / 2025-2026	
4. Date of this Description	
1 May, 2026	
5. Available formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
(90) / hour (2) units	
7. Name of Course Instructor	
Lec. Dr. Riyam Sajjad Ibrahim Lec. Dr. Mona Barakat Abdul-Latif	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: By the end of the academic year, students will be able to understand the functions of various cells and organs and perform various techniques for analyzing blood and other body fluids. Specific Objectives: - Students will be able to: 1. Identify the principles of physiology and its relationship to other sciences.

	2- Distinguish between the body's normal physiological state and a pathological state. 3- Use laboratory equipment and instruments. 4- Perform analyses of blood and other body fluids.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Work to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure					
Week	Hours	Required Learning Outcomes	Module or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical training	Understanding the subject	Carbon Dioxide Transport and Exchange	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
2	2 hours of theory 4 hours of practical work	Understanding the subject	Lung Volume and Capacity, Types of Hypoxia	Lecture and Practical Application in the Lab	Theoretical Tests (Quizzes) Practical Lab Tests
3	2 hours of theory 4 hours of practical work	Understanding the subject	Physiology of the digestive system, gastric phases	Lecture Practical application in the lab	Theoretical quizzes Practical lab exams
4	2 hours of theory 4 hours of practical work	Understanding the subject	Steps of digestion (carbohydrate, protein, and fat digestion and absorption)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the subject	Urinary system, renal functions, urine formation.	Lecture and hands-on lab work	Theoretical quizzes Practical laboratory tests
6	2 hours of theory 4 hours of practical work	Understanding the subject	Role of the kidney in maintaining body fluids to regulate blood pressure and acid-base balance	Theoretical lecture Practical application in the laboratory	Theoretical quizzes Practical lab exams

7	2 hours of theory 4 hours of practical work	Understanding the subject	Body Temperature Regulation and Control	Lecture, Theory, and Practical Lab Work	Theoretical Tests (Quizzes) Practical Lab Tests
8	2 hours of theory 4 hours of practical work	Understanding the subject	Nervous system, CNS, brain function, and centers	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
9	2 hours of theory 4 hours of practical work	Understanding the subject	Spinal cord, CSF, Spinal reflexes	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams
10	2 hours of theory 4 hours of practical work	Understanding the subject	PNS Autonomic and Sensory	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Exams
11	2 hours of theory 4 hours of practical work	Understanding the subject	Endocrine system control of hormones, types, and secretion	Lecture Practical application in the lab	Theoretical quizzes Practical laboratory exams
12	2 hours of theory 4 hours of practical work	Understanding the subject	Hormonal secretion from different glands	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical laboratory tests
13	2 hours of theory 4 hours of practical work	Understanding the subject	Reproductive system, male and female reproductive systems	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams

14	2 hours of theory 4 hours of hands-on training	Understanding the subject	Physiology of the skeletal system.	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical lab exams
15	2 hours of theory 4 hours of practical work	Understanding the subject	Special sense physiology (vision, hearing, smell, and taste).	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab exams

11. Course Assessment

The course is evaluated according to a rigorous system that ensures a fair and balanced assessment of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through short exams, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	Koeppen, B. M., & Stanton, B. A. (2024). Berne and Levy Physiology E-Book: Berne and Levy Physiology E-Book. Elsevier Health Sciences.
Primary References (Sources)	HALL, John E.; HALL, Michael E. (2021). Guyton and Hall

	textbook of medical physiology e-Book. Elsevier Health Sciences. Costanzo, L. (2021). Costanzo Physiology E-Book: Costanzo Physiology E-Book. Elsevier Health Sciences.
Recommended supplementary books and references (scientific journals, reports, etc.)	Khurana, I., & Khurana, A. (2020). Medical Physiology for Undergraduate Students, 2nd Updated Edition, eBook. Elsevier Health Sciences. Pal, G. K., & Pal, P. (2019). Comprehensive Textbook of Medical Physiology 2 Volumes. Jaypee Brothers Medical Publishers. Sembulingam, K. (2019). Essentials of Medical Physiology: With Free Review of Medical Physiology. Jaypee Brothers Medical Publishers
Electronic References, Websites	All references related to general physiology that are relevant to anesthesia and intensive care

Course Description Template

1. Course Title	
Biochemistry	
2. Course Code	
TU-ANE-114	
3. Semester / Year	
second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and integrated e-learning platforms.	
6. Number of Class Hours / Number of Units	
90))) /hours 4(units	
7. Name of Course Instructor	
Prof. Hussein Hassan Kharnoob Assist.lec. Essam Shaker Hamza	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: By the end of the current academic year, students will be able to: - Perform various techniques of qualitative and quantitative analysis of components in human blood and other body fluids in both healthy and diseased states. Specific Objectives: - By the end of the academic year, students will be able to: 1. Understand the basic principles of biochemistry and their applications. 2- Relate diseases to abnormal changes in blood components and other body fluids. 3- Collect and process biological samples. 4- Use and maintain the necessary equipment and instruments. 5- Assess the components of blood and other body fluids both qualitatively and quantitatively. 6- Be able to work safely in laboratories.

9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Work to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10. Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical work	Understanding the subject	Metabolism of protein abnormalities.	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 4 hours of practical work	Understanding the subject	Enzymes: definition, classification, general properties, and function.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
3	2 hours of theory 4 hours of practical work	Understanding the subject	Factors affecting enzyme activity, enzyme inhibition.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical work	Understanding the subject	Enzymes in Clinical Diagnosis.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

5	2 hours of theory 4 hours of practical work	Understanding the subject	Vitamins and coenzymes, fat-soluble vitamins, water-soluble vitamins.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical tests lab
6	2 hours of theory 4 hours of practical work	Understanding the subject	Nutrition and energy requirements.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical tests lab
7	2 hours of theory 4 hours of practical work	Understanding the subject	Hormones, definition, chemical nature, steroid hormones, proteins, amines.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical tests lab
8	2 hours of theory 4 hours of practical work	Understanding the subject	Liver function tests, bilirubin (conjugated and unconjugated), bile pigments, brom sulfon phthalene (BSP), diagnosis of various types of jaundice.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical tests lab
9	2 hours of theory 4 hours of practical work	Understanding the subject	Liver diseases, hepatitis, cirrhosis, necrosis.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical tests lab
10	2 hours of theory 4 hours of hands-on training	Understanding the subject	Changes in serum enzymes in liver disease.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical tests lab
11	2 hours of theory 4 hours of practical work	Understanding the subject	Biosynthesis and catabolism of fatty acids	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical tests lab
12	2 hours of theory 4 hours of practical work	Understanding the subject	Steroid Biosynthesis, Nitrogen Metabolism	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical tests lab
13	2 hours of theory 4 hours of practical work	Understanding the subject	Kidney function tests, measuring glomerular filtration, tubular filtration, and renal blood flow.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical tests lab
14	2 hours of theory 4 hours of practical work	Understanding the subject	Formation and composition of urine, changes in urine volume, specific gravity, and constituents.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical tests lab

			Overview of biological safety and security equipment		
15	2 hours of theory 4 hours of hands-on training	Understanding the subject	Urea, urea clearance test, creatinine, creatinine clearance test, insulin test, phenol sulfonylphalam (PSP), concentration test, dilution test. Accident response • Spill cleanup procedure Investigation of an accident inside the laboratory	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical tests lab

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through short exams, assignments, and class participation.
 - Practical: 15% – through ongoing assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	Lippincott's Illustrated Reviews: Biochemistry Fifth Edition Richard Harvey Denise Ferrier
Primary References (Sources)	ESSENTIALS OF BIOCHEMISTRY Pankaja Naik PhD Professor and Head Department of Biochemistry MVPS Dr Vasantrao Pawar Medical College Nashik, Maharashtra
Recommended supplementary books and references (scientific journals, reports, etc.)	General Chemistry – Ebbing
Electronic References, Websites	Scientific books available at Al-Turath University Library

Course Description Template

1. Course Title	
Microbiology	
2. Course Code	
TU-ANE-115	
3. Semester / Year	
first second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
90))hours) /4(units	
7. Name of Course Instructor	
Assist.lec. Mustafa Haitham Jamil lecturer. Mustafa Mamoun Ahmed	
8. Course Objectives	
Course Objectives	:Course Objectives General Objectives: By the end of the academic year, students will be able to: identify and describe the structure of a cell; describe bacteria and parasites; and explain the cell's immune mechanisms against pathogenic organisms. Specific Objectives: - Students will be able to: - 1. Identify the parts and components of the cell 2. Identify types of bacteria, parasites, and fungi. 3. Understand the cell's immune mechanisms against pathogens.

9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to advance education and achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-term planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10. Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical work	Understanding the subject	The Microorganism	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 4 hours of practical work	Understanding the subject	Bacteria: classification, structure, and functions of	Theoretical lecture Practical application of s in the lab	Theoretical quizzes Practical lab tests
3	2 hours of theory 4 hours of practical work	Understanding the subject	Media and Culture	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical work	Understanding the subject	Antibiotics and Antibiotic Resistance	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

5	2 hours of theory 4 hours of practical work	Understanding the subject	Fungi: characteristics, reproduction, and classification.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6–7	2 hours of theory 4 hours of practical work	Understanding the subject	Virus: structure, classification, and reproduction.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 4 hours of practical work	Understanding the subject	Parasites: introduction, parasite-host relationships, diagnosis	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9	2 hours of theory 4 hours of practical work	Understanding the subject	Classes of Parasites (Protozoa, Helminths, and Ectoparasites)	Lecture and Practical Laboratory Session	Theoretical quizzes Practical lab tests
10	2 hours of theory 4 hours of practical work	Understanding the subject	Helminths: structure and .classification	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11–12	2 hours of theory 4 hours of practical work	Understanding the subject	The immune system, mechanisms of the immune system (innate and adaptive immunity).	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	2 hours of theory 4 hours of practical work	Understanding the subject	Antigen, antibody	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
14	2 hours of theory 4 hours of practical work	Understanding the subject	Antigen–antibody reaction	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	2 hours of theory 4 hours of practical work	Understanding the subject	Sterilization and Disinfection	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11.Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.

- Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course textbook, if available)	Medical Microbiology" (10th Edition, 2023) Lippincott's Illustrated Reviews: Microbiology 2024
Primary References (Sources)	"Jawetz, Melnick & Adelberg's Medical Microbiology" (29th Edition, 2022) "Clinical Microbiology Made Ridiculously Simple" (8th Edition, 2023)
Recommended supplementary books and references (scientific journals, reports, etc.)	Review of Medical Microbiology and Immunology 2024
Electronic references, websites	All biology-related references relevant to anesthesia and intensive care

Course Description Template

25. Course Title
Medical Terminology 2
26. Course Code
TU-ANE-116
27. Semester / Year
second2026-2025 /
28.Date of Preparation of This Description
1 May, 2026
29. Available formats
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.
30.Number of Class Hours / Number of Units
)15) hours (1) / unit
31.Name of Course Instructor
Lec.Dr. Shahd Basem Mohammed
32. Course Objectives

Course Objectives	:Course Objectives Students will be able to identify the roots, suffixes, prefixes, and endings of medical terms.
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33. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 7. Short-term planning: Working to update vocabulary and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new vocabulary not exceeding 20% of the content of compatible curricula. 8. Medium-Term Planning: Establishing academic partnerships with corresponding departments in other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 9. Long-Term Planning: Develop an integrated learning environment based on blended learning; encourage scientific research; and collaborate with universities and international scientific institutions to modernize teaching and assessment methods in line with international standards.
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34. Course Structure

Week	Hours	Required Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	1 hours of theory	Understanding medical terminology specific to these units	Introduction – structural analysis – basic rules of medical word formation Major suffixes, suffixes denoting a state or condition	Theoretical Lecture	Theoretical quizzes

2	1 hours of theory	Understanding medical terminology specific to these units	Major suffixes, suffixes denoting medical actions Prefixes—prefixes for numbers and measurements	Theoretical Lecture	Theoretical quizzes
3	1 hours of theory	Understanding medical terminology specific to these units	Prefixes – prefixes of color Prefixes – prefixes of directions and position	Theoretical Lecture	Theoretical quizzes
4	1 hours of theory	Understanding medical terminology related to these units	Prefixes – prefixes Of size, time, and place Prefixes – prefixes of negation	Theoretical Lecture	Theoretical quizzes
5	1 hours of theory	Understanding the medical terminology specific to these units	Prefixes – prefixes of types Roots	Theoretical Lecture	Theoretical quizzes
6	1 hours of theory	Understanding medical terminology specific to these units	Word terminals, conditions	Theoretical Lecture	Theoretical quizzes
7	1 hours of theory	Understanding the medical terminology specific to these units	The body as a whole. Skin and its appendages	Theoretical Lecture	Theoretical quizzes
8	1 hours of theory	Understanding the medical terminology specific to these units	Gastrointestinal tract. Respiratory system	Theoretical Lecture	Theoretical quizzes
9	1 hours of theory	Understanding medical terminology specific to these units	Cardiovascular system. Blood and lymphatic system.	Theoretical Lecture	Theoretical quizzes
10	1 hours of theory	Understanding medical terminology specific to these units	Musculoskeletal system. Urogenital system.	Theoretical Lecture	Theoretical quizzes

11	1 hours of theory	Understanding the medical terminology specific to these units	Endocrine system	Theoretical Lecture	Theoretical quizzes
12	1 hours of theory	Understanding the medical terminology specific to these units	Nervous system	Theoretical Lecture	Theoretical quizzes
13	1 hours of theory	Understanding the medical terminology specific to these units	Special Senses	Theoretical Lecture	Theoretical quizzes
14	1 hours of theory	Understanding the medical terminology specific to these units	Oncology	Theoretical Lecture	Theoretical quizzes
15	1 hours of theory	Understanding the medical terminology specific to these units	Special related terms	Theoretical Lecture	Theoretical quizzes

35.Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

Semester Grade (40%), which includes:

- Theoretical: 40% – through quizzes, assignments, and class participation.

Final Grade (60%), which includes:

- Theoretical: 60% – through a final written exam to assess overall understanding of the material..

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

36. Learning and Teaching Resources

Required Textbooks (Syllabus, if available)	The Language of Medicine – Chabner
Primary References (Sources)	Medical Terminology: An Illustrated Guide – Cohen

Recommended supplementary books and references (scholarly journals, reports, etc.)	Medical Terminology Systems – Gyls
Electronic References, Websites	All references related to the Arabic language that are relevant to anesthesia and intensive care

Course Description Template

1. Course Title	
Arabic Language	
2. Course Code	
TU-ANE-117	
3. Semester / Academic Year	
second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
)15) hours (1) / units	
7. Name of Course Instructor	
Prof. Hussein Hassan Kharnoub Assist. Prof. Sinan Hassan Ali	
8. Course Objectives	
Course Objectives	Course Objectives • General Objective: Students will become familiar with grammatical and rhetorical expression. • Specific Objective: Students will learn about linguistic information and corrections in accordance with the rules of the Arabic language.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update vocabulary and curricula annually to align with recent developments in science and technology,

	in coordination with corresponding departments, while allowing for the addition of new vocabulary not exceeding 20% of the content of the corresponding curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	1 hours of theory	Understanding the subject	Introduction to Linguistic Errors – The Bound, Long, and Open “Taa”	Theoretical Lecture	Theoretical Quizzes
3	1 hour of theory	Understanding the subject	Rules for writing the elongated and shortened alif – solar and lunar letters	Theoretical Lecture	Theoretical Quizzes
4	1 hour of theory	Understanding the subject	Antonym and Synonym	Theoretical Lecture	Theoretical Quizzes
5	1 hour of theory	Understanding the subject	Writing the hamza	Theoretical Lecture	Theoretical Quizzes
6	1 hour of theory	Understanding the subject	Grading	Theoretical Lecture	Theoretical Quizzes
7	1 hour of theory	Understanding the subject	Nouns and Verbs and the Difference Between Them	Theoretical Lecture	Theoretical Quizzes
8	1 hour of theory	Understanding the subject	Outcomes	Theoretical Lecture	Theoretical Quizzes
9	1 hour of theory	Understanding the subject	Number	Theoretical Lecture	Theoretical Quizzes
10	1 hour of theory	Understanding the subject	Common Language Errors	Theoretical Lecture	Theoretical Quizzes

11	1 hour of theory	Understanding the subject	The letter "Nun" and vowel marks – Meanings of prepositions	Theoretical Lecture	Theoretical Quizzes
12	1 hour of theory	Understanding the subject	Formal Aspects of Administrative Writing	Theoretical Lecture	Theoretical Quizzes
13	1 hour of theory	Understanding the subject	Language of Administrative Communication	Theoretical Lecture	Theoretical Quizzes
14–15	2 hours of theory	Understanding the subject	Examples of administrative correspondence	Theoretical Lecture	Theoretical Quizzes

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

Semester Grade (40%), which includes:

- Theoretical: 40% – through quizzes, assignments, and class participation.

Final Grade (60%), which includes:

- Theoretical: 60% – through a final written exam to assess overall understanding of the material..

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Resources for Learning and Teaching

Required Textbooks (Curriculum, if applicable)	Arabic Language Books
Primary References (Sources)	All relevant resources
Recommended supplementary books and references (scholarly journals, reports, etc.)	Arabic Grammar by Muhammad Thiab.
Electronic references, websites	All references related to the Arabic language that are useful for anesthesia and intensive care

Second stage 2

Course Description Template

1. Course Title	
Fundamentals of Anesthesia	
2. Course Code	
TU-ANE-201	
3. Semester / Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
(90)hours / (4) units	
7. Name of Course Instructor	
Dr. Ahmed Majbal Hassan Dr. Omar Amer Abdel Moneim Dr. Mustafa Saad Majid	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: By the end of the year, students will be able to: 1- Gain a general overview of the history and types of anesthesia 2- Manage the patient prior to anesthesia. 3- Identify the different types of anesthetic agents 4- Understand how to use certain anesthesia and surgical equipment
9. Teaching and Learning Strategies	

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–3	2 hours of theory 4 hours of practical work	Understanding the subject	Drugs used in premedication, sedatives, and analgesics Drugs in detail.	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
4	2 hours of theory 4 hours of practical training	Understanding the subject	Anesthetic crises (laryngospasm, bronchospasm, hypoxia during anesthesia, malignant hyperthermia)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the subject	Week 4	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6–7	2 hours of theory 4 hours of practical training	Understanding the subject	Intravenous fluid types and usage	Theoretical lecture Practical application of “ ” in the lab	Theoretical quizzes Practical lab tests
8–9	2 hours of theory 4 hours of practical work	Understanding the subject	Blood and blood products.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10–11	2 hours of theory	Understanding the subject	Surgical positions and their complications	Theoretical lecture Practical	Theoretical quizzes Practical lab tests

	4 hours of practical work			application in the lab	
12–13	2 hours of theory 4 hours of practical training	Understanding the subject	Cardiopulmonary resuscitation CPR	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
14	2 hours of theory 4 hours of practical training	Understanding the subject	Intraoperative patient monitoring	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
15	2 hours of theory 4 hours of practical work	Understanding the subject	Safety measures in the operating room	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess general understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between the theoretical and practical components.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Morgan & Mikhail's Clinical Anesthesiology
Primary References (Sources)	Miller's Anesthesia
Recommended supplementary books and references (scientific journals, reports, etc.)	Clinical Anesthesia – Barash

Electronic references, websites	All references related to anesthesia that are relevant to anesthesia and intensive care
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Course Description Template

1. Course Name	
Fundamentals of Anesthesia Machines	
2. Course Code	
TU-ANE-202	
3. Semester / Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (90)	
7. Name of Course Instructor	
Dr. Firas Adnan Khalil Dr. Tabarak Hamid	
8. Course Objectives	
Course Objectives	:Course Objectives The course aims to familiarize students with the basics of equipment use and maintenance: Specific Objectives: By the end of the year, students should be able to: - 1. Understand the basics of how anesthesia machines work. 2- Operate all patient monitoring devices.

3. Maintain and service anesthesia and monitoring equipment.

9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10. Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical work	Understanding the subject	Operating Room Design and Functioning	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2–3	2 hours of theory 4 hours of practical training	Understanding the subject	Cannula, IV set, and device for intravenous infusion	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4–5	2 hours of theory 4 hours of lab work	Understanding the subject	Physical principles: behavior of molecules in solids and liquids, heat, and temperature Physical principles: properties of gases, temperature, and fluid flow through tubes and orifices	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

6–11	2 hours of theory 4 hours of practical training	Understanding the subject	Endotracheal tube (standard tube), laryngoscope, airway (oropharyngeal and nasopharyngeal), tracheostomy, facemask	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12–15	2 hours of theory 4 hours of practical work	Understanding the subject	Breathing systems and their components, definition, classification, and working principles	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical Lab Tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through short exams, assignments, and class participation.
 - Practical: 15% – through ongoing assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Understanding Anesthesia Equipment – Dorsch
Primary References (Sources)	Anesthesia Equipment Principles and Applications – Ehrenwerth
Recommended supplementary books and references (scientific journals, reports, etc.)	Principles of Anesthesia Equipment – Dorsch
Electronic references, websites	All relevant references Anesthesia equipment and techniques used in anesthesia and intensive care

Course Description Template

1. Course Name	
Applied Physiology 1	
2. Course Code	
TU-ANE-203	
3. Semester / Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (90)	
7. Name of Course Instructor	
Lec.Dr. Riyam Sajjad Ibrahim Lec.Dr. Mona Barakat Abdullatif	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: By the end of the academic year, students will be able to understand the functions of various body systems, respond to emergency and pathological situations, and understand their relationship to anesthesia. Specific Objectives: - Students will be able to: 1. Identify the effects of anesthesia on the body's systems.

	2- Manage emergencies that may occur during anesthesia. 3- Use laboratory equipment and instruments. 4- Perform various clinical examinations of the body
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9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical work	Understanding the subject	Electrical Components and Activity of the Heart	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 4 hours of practical work	Understanding the subject	The cardiac action potential in ventricular muscle and pacemaker tissues	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
3	2 hours of theory 4 hours of practical work	Understanding the subject	Contractile cardiomyocytes and excitation-contraction coupling	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical work	Understanding the subject	ECG and arrhythmia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the subject	cardiac cycle	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

6	2 hours of theory 4 hours of practical work	Understanding the subject	Heart sounds and waveforms generated during the cardiac cycle	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	2 hours of theory 4 hours of hands-on training	Understanding the subject	The left ventricular pressure-volume loop	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 4 hours of practical work	Understanding the subject	Cardiac innervation and control of heart rate	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9	2 hours of theory 4 hours of practical work	Understanding the subject	Cardiac reflexes	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10	2 hours of theory 4 hours of practical work	Understanding the subject	systemic circulation	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11	2 hours of theory 4 hours of practical work	Understanding the subject	Blood pressure regulation	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12	2 hours of theory 4 hours of practical work	Understanding the subject	Physiology of microcirculation (Starling's law of capillaries)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	2 hours of theory 4 hours of practical work	Understanding the subject	Venous circulation and venous return	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14	2 hours of theory 4 hours of practical work	Understanding the subject	Coronary circulation	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	2 hours of theory 4 hours of practical training	Understanding the subject	Spirometry and Lung Volumes	Theoretical lecture Practical application of in the lab	Theoretical quizzes Practical lab tests
11. Course Assessment					

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Guyton & Hall
Primary References (Sources)	West's Respiratory Physiology
Recommended supplementary books and references (scientific journals, reports, etc.)	Berne & Levy Physiology
Electronic references, websites	All references related to physiology and anesthesia that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name	
Fundamentals of Surgery 1	
2. Course Code	
TU-ANE-204	
3. Semester / Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
(75) hours / (3) units	
7. Name of Course Instructor	
Lec.Dr. Laith Hussein Lec. Dr. Hussein Ali Turki	
8. Course Objectives	
Course Objectives	:Course Objectives To teach students the fundamental principles of surgery, including the application of physiology and pathology in explaining the changes and complications that occur in the human body as a result of various injuries or surgical conditions, and how to manage them, i.e., the frameworks
9. Teaching and Learning Strategies	

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	1 hour of theory 4 hours of practical work	Understanding the subject	Metabolic response to injury	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	1 hour of theory 4 hours of practical work	Understanding the subject	Acute and Chronic Inflammation	Theoretical Lecture Practical Application in the Lab	Theoretical quizzes Practical lab tests
3	1 hour of theory 4 hours of practical work	Understanding the subject	Shock & Type Path Physiology	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	1 hour of theory 4 hours of practical work	Understanding the subject	Wounds, Tissue Repair & Scars	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	1 hour of theory	Understanding the subject	Surgical infection	Theoretical lecture Practical	Theoretical quizzes

	4 hours of practical work			application in the lab	Practical lab tests
6	1 hour of theory 4 hours of practical work	Understanding the subject	Patient safety	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	1 hour of theory 4 hours of practical work	Understanding the subject	Preoperative care & care during surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	1 hour of theory 4 hours of practical work	Understanding the subject	Head injury, management of an unconscious patient	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9	1 hour of theory 4 hours of practical work	Understanding the subject	Abscess, cellulitis, carbuncle, and nonspecific infection	Theoretical lecture Practical application in the lab	Theoretical Tests (Quizzes) Practical Lab Tests
10	1 hour of theory 4 hours of practical work	Understanding the subject	Gangrene: Types and Causes	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
11	1 hour of theory 4 hours of practical work	Understanding the subject	Fluid Therapy	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
12	1 hour of theory 4 hours of practical work	Understanding the subject	Nutritional Support in Surgery	Theoretical Lecture Practical Application of " " in the Lab	Theoretical quizzes Practical lab tests
13	1 hour of theory 4 hours of practical work	Understanding the subject	Acid–base balance	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
14	1 hour of theory 4 hours of practical work	Understanding the subject	Spinal injury, peripheral nerve injury	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests

15	1 hour of theory 4 hours of practical training	Understanding the subject	Principles of laparoscopic surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
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11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through short exams, assignments, and class participation.
 - Practical: 15% – through ongoing assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (syllabus, if available)	Bailey & Love's Short Practice of Surgery
Key References (Sources)	Schwartz's Principles of Surgery
Recommended supplementary books and references (scientific journals, reports, etc.)	Sabiston Textbook of Surgery
,Electronic Websites	References All references related to general surgery that pertain to anesthesia and intensive care

Course Description Template

1. Course Title	
Fundamentals of Internal Medicine 1	
2. Course Code	
TU-ANE-205	
3. Semester / Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
(90)hours / (4) units	
7. Name of Course Instructor	
Lec.Lec.Dr. Muhannad Sadiq Hassan Lec.Lec.Dr. Rasha Hassan Abdullah	
8. Course Objectives	
Course Objectives	:Course Objectives :General Objectives

	To familiarize students with all diseases that can affect the body's organs. Specific Objectives: Students will be able to identify diseases of: 1. The respiratory system. 2. The digestive system. 3. The kidneys. 4. The liver. 5. The endocrine system.
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9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical training	Understanding the subject	Diseases Caused by Infection / Concepts of Infection / Major Manifestations	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests

			/methods of diagnosis: bacteremia/septicemia/ principles of management.		
3–4	2 hours of theory 4 hours of practical work	Understanding the subject	Diseases of the Respiratory System—Introduction.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the subject	Major manifestations / investigations / respiratory function tests.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6–7	2 hours of theory 4 hours of practical work	Understanding the subject	Diseases of the Cardiovascular System / Introduction / Major Manifestations and Investigations	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 4 hours of practical work	Understanding the subject	Principles of electrocardiography / Normal ECG / Sinus tachycardia / Sinus bradycardia / Sinus arrhythmia.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9	2 hours of theory 4 hours of practical training	Understanding the subject	AIDS	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10–11	2 hours of theory 4 hours of practical work	Understanding the subject	Diseases of the Gastrointestinal Tract / Introduction / Major Manifestations / Investigations.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12–13	2 hours of theory 4 hours of practical work	Understanding the subject	Diseases of the liver / Introduction / Bilirubin metabolism / Major manifestations / Investigations.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
14–15	2 hours of theory 4 hours of practical work	Understanding the subject	Diseases of the Kidney / Introduction to Major Manifestations / Investigations.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (syllabus, if available)	Davidson's Principles and Practice of Medicine
Primary References (Sources)	Harrison's Principles of Internal Medicine
Recommended Books and Supporting References (scientific journals, reports, etc.)	Kumar and Clark Clinical Medicine
Electronic references, websites	All references related to internal medicine that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name	
Pharmacology1	
2. Course Code	
TU-ANE-206	
3. Semester / Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (3) (60)units	
7. Name of Course Instructor	
Lec.Dr. Wissam Salem Mahmoud	
8. Course Objectives	
Course Objectives	:Course Objectives

	:General Objective To introduce students to medications and emphasize those used in anesthesia Specific Objectives: By the end of the year, students will be able to: 1. Recognize the basics of how medications work, how they affect the body, and how the body responds to them 2- Distinguish between the medications used for each of the body's systems, such as the circulatory and respiratory systems 3- Identify the medications used in general and regional anesthesia.
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9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
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1	2 hours of theory 4 hours of practical work	Understanding the subject	Principles of Drug Therapy. Pharmacokinetics;	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 4 hours of practical work	Understanding the subject	Absorption, distribution, metabolism, and excretion of drugs. Pharmacodynamics;	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
3	2 hours of theory 4 hours of practical work	Understanding the subject	Drug-receptor interaction.	Theoretical lecture Practical application in the lab	Theory quizzes Practical lab tests
4	2 hours of theory 4 hours of practical work	Understanding the subject	Efficacy, potency, agonists, antagonists.	Theoretical lecture Practical application of s in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the subject	Cholinergic agonists and antagonists	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	2 hours of theory 74 hours of 8practical 9work	Understanding the subject	Adrenergic Agonists and Adrenergic Antagonists	Lecture and Practical Laboratory Session	Theory quizzes Practical lab tests
7	2 h10ours of the lory 4 hours of practical work	Understanding the subject	Drugs affecting the cardiovascular system:	Theoretical lecture Practical application in the lab	Theory quizzes Practical lab tests
8-9	2 hours of theory 4 hours of practical work	Understanding the subject	Antihypertensive drugs.	Theoretical lecture Practical application in the lab	Theory quizzes Practical lab tests
10	2 hours of theory 4 hours of practical work	Understanding the subject	Heart Failure	Theoretical Lecture Practical Application in the Lab	Theory quizzes Practical lab tests
11	2 hours of theory 4 hours of practical work	Understanding the subject	Drugs affecting the cardiovascular system:	Theoretical lecture Practical application in the lab	Theory Quizzes Practical Lab Tests
12	2 hours of theory	Understanding the subject	Anti-arrhythmic.	Theoretical lecture Practical	Theory quizzes Practical lab tests

	4 hours of practical work			application in the lab	
13	2 hours of theory 4 hours of practical work	Understanding the subject	Antianginal drugs	Theoretical lecture Practical application in the lab	Theory quizzes Practical lab tests
14	2 hours of theory 4 hours of practical work	Understanding the subject	Diuretics	Theoretical lecture Practical application in the lab	Theory quizzes Practical lab tests
15	2 hours of theory 4 hours of practical work	Understanding the subject	Antihistamines	Theoretical lecture Practical application in the lab	Theory Quizzes Practical Lab Tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Katzung Basic and Clinical Pharmacology
Main References (Sources)	Rang & Dale's Pharmacology
Recommended Books and References (Scientific Journals, Reports, etc.)	Goodman & Gilman, *The Pharmacological Basics* textbook. Lippincott Pharmacology

Electronic references, websites	All references related to pharmacology used in anesthesia and intensive care
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Course Description Template

1. Course Title
Medical Terminology
2. Course Code
TU-ANE-207
3. Semester / Year
first / 2025-2026
4. Date Prepared
1 May, 2026
5. Available Attendance Formats
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.
6. Number of Class Hours / Number of Units
30))hours (2) / units
7. Name of Course Instructor
Lec.Dr. Jaafar Abu Talib muhammed
8. Course Objectives

Course Objectives	:Course Objectives Students will be able to identify the roots, suffixes, prefixes, and endings of medical terms.
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9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update vocabulary and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new vocabulary not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards. 4.
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10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory	Understanding the subject	Introduction – Structural Analysis – Basic Rules of Medical Terminology	Theoretical Lecture	Theoretical quizzes
2	2 hours of theory	Understanding the subject	building.	Theoretical Lecture	Theoretical quizzes
3	2 hours of theory	Understanding the subject	Major suffixes—suffixes denoting a state or condition.	Theoretical Lecture	Theoretical quizzes
4	2 hours of theory	Understanding the subject	Major suffixes—suffixes denoting medical actions.	Theoretical Lecture	Theoretical quizzes
5	2 hours of theory	Understanding the subject	Prefixes—prefixes of numbers and measures.	Theoretical Lecture	Theoretical quizzes

6	2 hours of theory	Understanding the subject	Prefixes—prefixes of color.	Theoretical Lecture	Theoretical quizzes
7	2 hours of theory	Understanding the subject	Prefixes—prefixes of direction and position.	Theoretical Lecture	Theoretical quizzes
8	2 hours of theory	Understanding the subject	Prefixes—prefixes of size, time, and place.	Theoretical Lecture	Theoretical quizzes
9	2 hours of theory	Understanding the subject	Roots.	Theoretical Lecture	Theoretical quizzes
10	2 hours of theory	Understanding the subject	Word terminals.	Theoretical Lecture	Theoretical quizzes
11	2 hours of theory	Understanding the subject	Conditions.	Theoretical Lecture	Theoretical quizzes
12	2 hours of theory	Understanding the subject	Skin and its appendages.	Theoretical Lecture	Theoretical quizzes
13	2 hours of theory	Understanding the subject	Gastrointestinal Tract	Theoretical Lecture	Theoretical quizzes
14	2 hours of theory	Understanding the subject	Respiratory system.	Theoretical Lecture	Theoretical quizzes
15	2 hours of theory	Understanding the subject	Cardiovascular System.	Theoretical Lecture	Theoretical quizzes

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 40% – through quizzes, assignments, and class participation.

- Final Grade (60%), which includes:
 - Theoretical: 60% – through a final written exam to assess general understanding of the material.

This system is applied to both semesters to ensure consistency in assessment between the theoretical and practical components.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	The Language of Medicine – Chabner
Primary References (Sources)	Medical Terminology: An Illustrated Guide – Cohen
Recommended supplementary books and references (scientific journals, reports, etc.)	Medical Terminology Systems – Gylys
Electronic references, websites	All references related to medical terminology used in anesthesia and intensive care

Course Description Template

1. Course Title
Computer Applications
2. Course Code
TU-ANE-208
3. Semester / Year
first / 2025-2026
4. Date Prepared
1 May, 2026
5. Available Attendance Formats
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.
6. Number of Class Hours / Number of Units
hours / (2) (45)units
7. Name of Course Instructor
Assist.LecSahar Ali .
8. Course Objectives

Course Objectives	:Course Objectives General Objective: By the end of the academic year, students will be able to: acquire skills in using basic office applications and creating office files and documents; use the operating system; and understand the fundamentals of working in a digital environment. Specific Objective: Students will be able to: Acquire knowledge in managing and using various computer applications.
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9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	1 hrs theory 2 hours of practical work	Understanding the material	SPSS program concept Operating it involves data analysis steps.	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	1 hrs theory 2 hours of practical work	Understanding the material	Identifying the components of the main screen	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3	1 hrs theory 2 hours of practical work	Understanding the material	Sorting and swapping data: Statistical procedure	Theoretical Lecture Practical	Theoretical Quizzes

				Application in the Lab	Practical Lab Tests
4	1 hrs theory 2 hours of practical work	Understanding the material	Identifying the given graphical summary	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
5	1 hrs theory 2 hours of practical work	Understanding the material	Understanding the statistical summary	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
6	1 hrs theory 2 hours of practical work	Understanding the material	Comparing means, comparing variables	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
7	1 hrs theory 2 hours of practical work	Understanding the material	Conducting some non-parametric tests(chi-square)	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
8	1 hrs theory 2 hours of practical work	Understanding the material	Working with charts	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
9-10	1 hrs theory 2 hours of practical work	Understanding the material	Summarize (cross tabs) , custom tables (Basic tables), Anova Models (one - way), non parametric methods (one sample, two sample, independent, two samples related, several samples independent, several sample related).	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
11-13	1 hrs theory 2 hours of practical work	Understanding the material	Encyclopedia of Humman body The concept of the program running it	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
14	1 hrs theory 2 hours of practical work	Understanding the material	Learning about the vocabulary of the human body and utilizing the presentation methods it provides.	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
15	1 hrs theory 2 hours of practical work	Understanding the material	The latest version runs under the Windows environment.	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess general understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between the theoretical and practical components.

12. Learning and Teaching Resources	
Required textbooks (course materials, if available)	Graham brown, david Watson, cambridge IGCSE information and communication technology 3 rd edition 2020
Primary References (Sources)	Alan Evans kendall martin, marray anne poasty technology in action complete 16 th edition 2020
Recommended supplementary books and references (scientific journals, reports, etc.)	Ahmed banafa introduction to AI 1st edition 2024
Electronic references, websites	All computer-related references relevant to anesthesia and intensive care

Course Description Template

1. Course Title
Crimes of the Ba'ath Regime in Iraq
2. Course Code
TU-ANE-209
3. Semester / Academic Year
first / 2025-2026
4. Date Prepared
1 May, 2026
5. Available Attendance Formats
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.
6. Number of Class Hours / Number of Units
30))hours (2) / units

7. Name of Course Instructor					
Lec.Dr. Hussein Ali Turki					
8. Course Objectives					
Course Objectives	:Course Objectives • General Objective: To familiarize students with the crimes committed by the Ba’athist regime in Iraq. • Specific Objective: To familiarize students with the crimes committed by the Ba’athist regime in Iraq, to provide insight into what occurred, and to ensure that such crimes are prevented from happening again.				
9. Teaching and Learning Strategies					
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.				
10.Course Structure					
Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory	Understanding the Article	- Crimes of the Ba'ath regime under the 2005 Iraqi Supreme Criminal Court Law • The Concept of Crimes and Their Categories • Definition of a crime in linguistic and technical terms	Theoretical lecture	Theoretical Quizzes

			• Categories of Crimes • Crimes of the Ba'ath regime as documented by the Iraqi Supreme Criminal Court in 2005 • Types of International Crimes • Decisions Issued by the Supreme Criminal Court		
3–6	2 hours of theory	Understanding the Material	- Psychological and social crimes and their effects, and the most notable violations committed by the Ba'athist regime in Iraq • Psychological Crimes • Mechanisms of psychological crimes • Consequences of psychological crimes • Social Crimes • The Militarization of Society • The Ba'athist Regime's Stance on Religion • Violations of Iraqi Laws • Images of Human Rights Violations and Crimes Committed by the Authorities • Some Decisions Regarding the Ba'ath Regime's Political and Military Abuses • Prisons and Detention Centers of the Ba'athist Regime	Theoretical lecture	Theoretical Quizzes
7–10	2 hours of theory	Understanding the Material	- Environmental Crimes of the Ba'ath Regime in Iraq • War and radiation pollution and landmine explosions • Destruction of Cities and Villages (Scorched Earth Policy) • Drainage of the marshes	Theoretical lecture	Theoretical Quizzes

			• Clearing of palm groves, trees, and crops		
11–14	2 hours of theory	Understanding the Material	- Crimes involving mass graves • Genocidal Mass Graves Committed by the Ba'athist Regime in Iraq • Chronological classification of genocide mass graves in Iraq from 1963 to 2003	Theoretical lecture	Theoretical Quizzes

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 40% – through quizzes, assignments, and class participation.
- Final Grade (60%), which includes:
 - Theoretical: 60% – through a final written exam to assess general understanding of the material.

This system is applied to both semesters to ensure consistency in assessment between the theoretical and practical components.

12. Learning and Teaching Resources

Required textbooks (course materials, if available)	Ministry of Higher Education Approved Curriculum
Key References (Sources)	Official Iraqi Documentation Archives
Recommended supporting books and references (scholarly journals, reports, etc.)	National Commission for Accountability and Justice. Human rights organizations
Electronic references, websites	Scientific books available in the library of Al-Turath University

Course Description Template

13.Course Title
Arabic Language1
14.Course Code
TU-ANE-210
15.Semester / Academic Year
first2026-2025 /
16.Date Prepared
1 May, 2026
17.Available Attendance Formats
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.
18.Number of Class Hours / Number of Units

)15) hours (1) / units					
19.Name of Course Instructor					
Prof. Hussein Hassan Kharnoub			Assist. Prof. Sinan Hassan Ali		
20.Course Objectives					
Course Objectives		Course Objectives • General Objective: Students will become familiar with grammatical and rhetorical expression. • Specific Objective: Students will learn about linguistic information and corrections in accordance with the rules of the Arabic language.			
21.Teaching and Learning Strategies					
Strategy		The program relies on various types of planning to achieve the course objectives through the following: 4. Short-Term Planning: Working to update vocabulary and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new vocabulary not exceeding 20% of the content of the corresponding curricula. 5. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 6. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.			
22.Course Structure					
Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	1 hours of theory	Understanding the Material	Introduction to Linguistic Errors – The Bound, Long, and Open “Taa”	Theoretical Lecture	Theoretical Quizzes
3	1 hour of theory	Understanding the material	Rules for writing the elongated and shortened alif – solar and lunar letters	Theoretical Lecture	Theoretical Quizzes

4	1 hour of theory	Understanding the material	Antonym and Synonym	Theoretical Lecture	Theoretical Quizzes
5	1 hour of theory	Understanding the Material	Writing the hamza	Theoretical Lecture	Theoretical Quizzes
6	1 hour of theory	Understanding of the material	Grading	Theoretical Lecture	Theoretical Quizzes
7	1 hour of theory	Understanding the Material	Nouns and Verbs and the Difference Between Them	Theoretical Lecture	Theoretical Quizzes
8	1 hour of theory	Understanding the material	Outcomes	Theoretical Lecture	Theoretical Quizzes
9	1 hour of theory	Understanding the Material	Number	Theoretical Lecture	Theoretical Quizzes
10	1 hour of theory	Understanding the Material	Common Language Errors	Theoretical Lecture	Theoretical Quizzes
11	1 hour of theory	Understanding the Material	The letter "Nun" and vowel marks – Meanings of prepositions	Theoretical Lecture	Theoretical Quizzes
12	1 hour of theory	Understanding the Material	Formal Aspects of Administrative Writing	Theoretical Lecture	Theoretical Quizzes
13	1 hour of theory	Understanding the Material	Language of Administrative Communication	Theoretical Lecture	Theoretical Quizzes
14–15	2 hours of theory	Understanding the material	Examples of administrative correspondence	Theoretical Lecture	Theoretical Quizzes

23. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 40% – through quizzes, assignments, and class participation.
- Final Grade (60%), which includes:
 - Theoretical: 60% – through a final written exam to assess general understanding of the material.

This system is applied to both semesters to ensure consistency in assessment between the theoretical and practical components.

24. Resources for Learning and Teaching

Required Textbooks (Curriculum, if applicable)	Arabic Language Books
Primary References (Sources)	All relevant resources

Recommended supplementary books and references (scholarly journals, reports, etc.)	Arabic Grammar by Muhammad Thiab.
Electronic references, websites	All references related to the Arabic language that are useful for anesthesia and intensive care

Course Description Template

1. Course Title	Fundamentals of Anesthesia 2
2. Course Code	TU-ANE-221
3. Semester / Year	second / 2025-2026
4. Date Prepared	1 May, 2026
5. Available Attendance Formats	Lecture halls, teaching labs, smart boards, and blended e-learning platforms.
6. Number of Class Hours / Number of Units	

(90)hours / (4) units	
7. Name of Course Instructor	
Dr. Ahmed Majbal Hassan Dr. Omar Amer Abdel Moneim Dr. Mustafa Saad Majid	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: By the end of the year, students will be able to: 1- Gain a general overview of the history and types of anesthesia 2- Manage the patient prior to anesthesia. 3- Identify the different types of anesthetic agents 4- Understand how to use certain anesthesia and surgical equipment
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Work to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new course content not exceeding 20% of the content of compatible curricula. 2. Medium-term planning: Establish academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, and host professors and conduct academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards
10.Course Structure	

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical training	Understanding the subject matter	History of Anesthesia and Introduction + Scope of Anesthesiology	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 4 hours of practical work	Understanding the material	Choice of aesthetic technique	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
3	2 hours of theory 4 hours of practical work	Understanding the material	Pre-anesthetic visit and assessment	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical work	Understanding the material	Pre-medication goals and therapeutic management	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5–6	2 hours of theory 4 hours of practical work	Understanding the Material	General pharmacology	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7–8	2 hours of theory 4 hours of practical work	Understanding the material	Inhalational anesthetic agent (in detail)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9–10	2 hours of theory 4 hours of practical work	Understanding the material	Inhalational anesthetic agent Cont.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11–12	2 hours of theory 4 hours of practical work	Understanding the material	Intravenous anesthetic agents in detail	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	2 hours of theory 4 hours of practical training	Understanding the Material	Intravenous anesthetic agent Cont.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests

14–15	2 hours of theory 4 hours of practical work	Understanding the material	Muscle relaxants in detail and reversal	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
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11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Morgan & Mikhail's Clinical Anesthesiology
Primary References (Sources)	Miller's Anesthesia
Recommended supplementary books and references (scientific journals, reports, etc.)	Clinical Anesthesia – Barash
Electronic references, websites	All references related to anesthesia that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name
Basics of Anesthesia equipment 2
2. Course Code
TU-ANE-222
3. Semester / Year

second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (90)	
7. Name of Course Instructor	
Lec.Dr. Firas Adnan Khalil Lec.Dr. Tabarak Hamid	
8. Course Objectives	
Course Objectives	:Course Objectives The course aims to familiarize students with the basics of using and maintaining equipment: Specific Objectives: By the end of the year, students should be able to: - 1- Identify sources of contamination in operating rooms and methods for addressing them. 2- Be able to handle the sterilization methods for certain devices used in anesthesia and their maintenance. 3- Understand the basic principles, potential problems, and methods of using equipment and devices in anesthesia and operating rooms
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Work to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence.

3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Name of Unit or Topic	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical work	Understanding the material	Atmospheric pollution, measurement, and control of pollution scavenging systems	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3–4	2 hours of theory 4 hours of practical work	Understanding the material	Infusion equipment, patient monitoring, pain management, filtration, and autotransfusion	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5–8	2 hours of theory 4 hours of practical training	Understanding the subject matter	The supply of anesthetic gas cylinders, oxygen concentrator, medical gas, service, bulk storage and supply of gases, piped medical vacuum, electrical supply distribution of pipework, terminal outlet flexible pipeline, testing and inspection of medical gas pipelines	Theoretical lecture on the practical application of the in the lab	Theoretical quizzes Practical lab tests
9–10	2 hours of theory 4 hours of practical work	Understanding the material	Vaporizer: law of vaporization, vaporizing system, types of vaporizers, factors affecting vaporizer performance, calibration of vaporizers, filling of vaporizers.	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical lab tests
11	2 hours of theory 4 hours of practical work	Understanding the material	Flowmeter and flow control needle valves	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12–13	2 hours of theory 4 hours of practical work	Understanding the material	Pressure gauge and reducing valve	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

14–15	2 hours of theory 4 hours of practical work	Understanding the material	Cleaning and Sterilization: Decontamination, Disinfection, and Sterilization	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
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11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the laboratory or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess general understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between the theoretical and practical components.

12. Learning and Teaching Resources

Required textbooks (course textbook, if available)	Understanding Anesthesia Equipment – Dorsch
Primary References (Sources)	Anesthesia Equipment Principles and Applications – Ehrenwerth
Recommended supplementary books and references (scientific journals, reports, etc.)	Principles of Anesthesia Equipment – Dorsch
Electronic references, websites	All relevant references Anesthesia equipment and techniques used in anesthesia and intensive care

Course Description Template

1. Course Title
Applied Physiology 2
2. Course Code
TU-ANE-223
3. Semester / Year
second / 2025-2026
4. Date Prepared

1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (90)	
7. Name of Course Instructor	
Lec.Dr. Riyam Sajjad Ibrahim Lec.Dr. Mona Barakat Abdullatif	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: By the end of the academic year, students will be able to understand the functions of various body systems, respond to emergency and pathological situations, and recognize their relationship to anesthesia. Specific Objectives: The student will be able to: 1. Identify the effects of anesthesia on the body's systems. 2- Manage emergencies that may occur during anesthesia. 3. Use laboratory equipment and instruments. 4. Perform various clinical examinations of the body.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Work to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific

research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical work	Understanding the Material	Lung mechanics (compliance and resistance)	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 4 hours of practical work	Understanding the Material	Ventilation-perfusion	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical lab tests
3	2 hours of theory 4 hours of practical training	Understanding the Material	Pre-oxygenation, apneic oxygenation, and diffusion hypoxia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical work	Understanding the material	Transport of gases, oxygen, and carbon dioxide	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the material	Systemic effects of hypoxia and hyperoxia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	2 hours of theory 4 hours of practical work	Understanding the material	Control of ventilation	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	2 hours of theory 4 hours of practical work	Understanding the material	Non-respiratory functions of the lung	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 4 hours of practical work	Understanding the material	Pre-operative smoking and the physiological effects of smoking cessation	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

9	2 hours of theory 4 hours of practical work	Understanding the material	Thermoregulatory response to prevent hypothermia and hyperthermia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10	2 hours of theory 4 hours of practical work	Understanding the material	Heat loss during anesthesia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11	2 hours of theory 4 hours of practical work	Understanding the Material	Body fluids and electrolytes	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12	2 hours of theory 4 hours of practical work	Understanding the material	Vomiting and dehydration	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	2 hours of theory 4 hours of practical work	Understanding the Material	Acid-base balance	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14	2 hours of theory 4 hours of practical work	Understanding the Material	Cerebral physiology	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	2 hours of theory 4 hours of practical work	Understanding the material	Physiological differences between children and adults, and general and anesthesia	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical Laboratory Tests

11.Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Guyton & Hall
Primary References (Sources)	West's Respiratory Physiology
Recommended supplementary books and references (scientific journals, reports, etc.)	Berne & Levy Physiology
Electronic references, websites	All references related to physiology and anesthesia that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name
Fundamentals of Surgery 2
2. Course Code
TU-ANE-224
3. Semester / Year
second / 2025-2026
4. Date Prepared
1 May, 2026

5. Available Attendance Formats					
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.					
6. Number of Class Hours / Number of Units					
(75) hours / (3) units					
7. Name of Course Instructor					
Lec.Dr. Laith Hussein			Lec.Dr. Hussein Ali Turki		
8. Course Objectives					
Course Objectives		:Course Objectives To teach students the fundamental principles of surgery, including the application of physiology and pathology in explaining the changes and complications that occur in the human body as a result of various injuries or surgical conditions, and how to manage them, i.e., the frameworks			
9. Teaching and Learning Strategies					
Strategy		The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.			
10.Course Structure					
Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	1 hour of theory	Understanding the Material	Principles of Pediatric Surgery	Theoretical Lecture Practical	Theoretical Quizzes Practical Lab Tests

	4 hours of hands-on training			Application in the Lab	
2	1 hour of theory 4 hours of practical work	Understanding the Material	Warfarin-related injuries	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
3	1 hour of theory 4 hours of practical work	Understanding the material	Day-case surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	1 hour of theory 4 hours of practical work	Understanding the material	Body's reaction to injury	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	1 hour of theory 4 hours of practical work	Understanding the material	Infection of the pint and bone	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	1 hour of theory 4 hours of practical work	Understanding the material	Ulcer, sinuses, fistula	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	1 hour of theory 4 hours of practical work	Understanding the material	Type of surgical disease: hereditary, congenital, acquired	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	1 hour of theory 4 hours of practical work	Understanding the material	Sterile precautions and AIDS	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9	1 hour of theory 4 hours of practical work	Understanding the material	Calcium Metabolism and Calcification	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
10	1 hour of theory 4 hours of practical work	Understanding the material	Coagulopathy and blood dyscrasia in surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
11	1 hour of theory 4 hours of practical work	Understanding the material	Specific infection	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

12	1 hour of theory 4 hours of practical work	Understanding the material	Types of bacteria in surgical microbiology	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
13	1 hour of theory 4 hours of practical work	Understanding the material	Venous disease— thrombophlebitis and venous thrombosis	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical Laboratory Tests
14	1 hour of theory 4 hours of practical work	Understanding the Material	Oncology	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	1 hour of theory 4 hours of practical work	Understanding the Material	Abortion, C-section, and hysterectomy	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (syllabus, if available)	Bailey & Love's Short Practice of Surgery
Key References (Sources)	Schwartz's Principles of Surgery
Recommended supplementary books and references (scientific journals, reports, etc.)	Sabiston Textbook of Surgery

,Electronic Websites	References	All references related to general surgery that pertain to anesthesia and intensive care
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Course Description Template

1. Course Title
Fundamentals of Internal Medicine 2
2. Course Code
TU-ANE-225
3. Semester / Year
second / 2025-2026
4. Date Prepared
1 May, 2026

5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units 90	
7. Name of Course Instructor	
Lec.Dr. Muhannad Sadiq Hassan Lec.Dr. Rasha Hassan Abdullah	
8. Course Objectives	
Course Objectives	:Course Objectives :General Objectives To familiarize students with all diseases that can affect the body's organs. Specific Objectives: Students will be able to identify diseases of: 1. The respiratory system. 2. The digestive system. 3. The kidneys. 4. The liver. 5. The endocrine system.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards

10.Course Structure					
Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical work	Understanding the Material	Introduction to Hematology / Major Manifestations / Investigations	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3–4	2 hours of theory 4 hours of practical work	Understanding the material	Anemia: Introduction, Major Manifestations, Classification, and Investigation	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the Material	Diseases of the Endocrine Glands/Introduction	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6–7	2 hours of theory 4 hours of practical work	Understanding the material	Hypothalamus, pituitary, thyroid, parathyroid, adrenal, and gonads	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 4 hours of practical work	Understanding the material	Connective Tissue Diseases in Dermatology / Introduction / Major Manifestations / Investigation	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9	2 hours of theory 4 hours of practical work	Understanding the Material	Diseases of the Nervous System/Introduction	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10–11	2 hours of theory 4 hours of practical work	Understanding the material	Major incident Investigations	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12–13	2 hours of theory 4 hours of practical work	Understanding the material	Principles of critical care medicine, major manifestations of critical illnesses, shock, and sepsis	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
14–15	2 hours of theory 4 hours of practical work	Understanding the material	Specific forms of organ failure (multiple organ failure, ARDS, DIC, ARF, hepatic failure)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
11. Course Assessment					

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (syllabus, if available)	Davidson's Principles and Practice of Medicine
Primary References (Sources)	Harrison's Principles of Internal Medicine
Recommended supporting books and references (scientific journals, reports, etc.)	Kumar and Clark Clinical Medicine
Electronic resources, websites	All references related to internal medicine that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name
Pharmacology 2
2. Course Code
TU-ANE-226
3. Semester / Year
second / 2025-2026
4. Date Prepared

1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (3) (60)units	
7. Name of Course Instructor	
Lec.Dr. Wissam Salem Mahmoud	
8. Course Objectives	
Course Objectives	:Course Objectives :General Objective To introduce students to medications and emphasize those used in anesthesia Specific Objectives: By the end of the year, students will be able to: 1. Identify the uses of various classes of medications. 2. Understand the side effects of medications and the effects of high doses on the body (toxicology). 3. Distinguish between different types of antibiotics and their uses
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Work to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new course content not exceeding 20% of the content of compatible curricula. 2. Medium-term planning: Establish academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, host visiting professors, and conduct academic exchange visits to enhance academic excellence.

3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical work	Understanding the Material	Hypnotic and Sensitive Drugs	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 4 hours of practical work	Understanding the Material	Hypnotic and Sensitizing Drugs	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
3	2 hours of theory 4 hours of practical work	Understanding the subject matter	Narcotic opioids and analgesics	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical work	Understanding the material	Analgesic, antipyretic, and anti-inflammatory agent	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the material	Analgesic, antipyretic, and anti-inflammatory agent	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	2 hours of theory 4 hours of practical work	Understanding the material	Gastrointestinal and antiemetic drugs	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	2 hours of theory 4 hours of practical work	Understanding the material	Gastrointestinal and antiemetic drugs	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 4 hours of practical work	Understanding the Material	Diabetes Medications	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

9	2 hours of theory 4 hours of practical training	Understanding the Material	Adrenal Hormones Corticosteroids Inhibitors of Adrenocorticoid Biosynthesis or Function	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10–11	2 hours of theory 4 hours of practical work	Understanding the Material	Antimicrobial agents - Cell wall inhibitors. - Protein synthesis inhibitors. - Quinolones and folic acid antagonists.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12	2 hours of theory 4 hours of practical work	Understanding the material	- Antifungal drugs. - Antiviral drugs.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
13	2 hours of theory 4 hours of practical work	Understanding the Material	Anti-epileptic drugs	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14	2 hours of theory 4 hours of practical work	Understanding the Material	Anti-Parkinson's drugs	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	2 hours of theory 4 hours of practical work	Understanding the Material	Clinical Toxicology	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources	
Required textbooks (course syllabus, if available)	Katzung Basic and Clinical Pharmacology
Primary References (Sources)	Rang & Dale's Pharmacology
Recommended supplementary books and references (scientific journals, reports, etc.)	Goodman & Gilman, *The Pharmacological Basics* textbook. Lippincott Pharmacology
Electronic references, websites	All references related to pharmacology relevant to anesthesia and intensive care

Course Description Template

1. Course Name
Statistics 2
2. Course Code
TU-ANE-227

3. Semester / Year	
second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and integrated e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (2) units (45)	
7. Name of Course Instructor	
Assist.LecSahar Ali .	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: To familiarize students with the stages of the statistical method in medical and scientific applications. Specific Objectives: 1- To understand the importance of statistics in scientific research as a foundation for analysis in the health and medical sciences. 2- To understand descriptive statistics and probability theory. 3- To understand probability models and probability distributions. 4- To understand sample distributions and statistical variables. 5- To understand significance tests for various parameters. 6- To understand regression analysis and time series models. 7- To become familiar with some nonparametric test methods.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 4. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 5. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting

- professors, and conducting academic exchange visits to enhance academic excellence.
6. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	1 hour of theory 2 hours of practical work	Understanding the Material	Definition of Biostatistics, Some Basic Concepts (Data and Sources of Data, Variables, Population, Samples, and Methods of Data Collection)	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
1–2	1 hour of theory 2 hours of practical work	Understanding the material	Methods of data presentation (Introduction, Ordered Arrays, Frequency Distribution, Graphs)	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
3–4	1 hour of theory 2 hours of practical work	Understanding the Material	Descriptive Statistics: Measures of Central Tendency (Arithmetic Mean, Median, Mode) for ungrouped and grouped data.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
3–4	1 hour of theory 2 hours of practical work	Understanding the Material	Descriptive Statistics: Measures of Dispersion (Range, Variance, Standard Deviation, Coefficient of Variation, Standard Errors)	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
5	1 hour of theory 2 hours of practical work	Understanding the Material	Percentiles, Quartiles, and Interquartile Range	Lecture on the Theory and Practical Application of the " " in the Laboratory	Theoretical Quizzes Practical lab tests
6	1 hour of theory 2 hours of practical work	Understanding the material	Normal distribution applications.	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
7	1 hour of theory	Understanding the Material	Moments, Skewness, and Kurtosis.	Theoretical lecture Practical	Theoretical quizzes

	2 hours of practical work			application in the lab	Practical lab tests
8	1 hour of theory 2 hours of practical work	Understanding the Material	Elementary Probability Theory.	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical lab tests
9	1 hour of theory 2 hours of practical work	Understanding the Material	Statistical Estimation Theory (Estimation of Population Parameters, by Point and by Interval)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10	1 hour of theory 2 hours of practical work	Understanding the Material	Significance Test: Degree of Freedom, P-Value, and Significance Level; Type I and Type II Errors	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
11	1 hour of theory 2 hours of practical work	Understanding the material	Different types of t-tests	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
12	1 hour of theory 2 hours of practical work	Understanding the Material	Chi-Square Significance	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	1 hour of theory 2 hours of practical work	Understanding the material	One-way ANOVA test.	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical Lab Tests
14	1 hour of theory 2 hours of practical work	Understanding the Material	Simple Correlation Coefficients.	Theoretical Lecture Practical Application in the Lab	Theoretical quizzes Practical Lab Tests
15	1 hour of theory 2 hours of practical work	Understanding the Material	Simple Linear Regression	Lecture on Theory and Practical Application in the Lab	Theoretical Quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.

- Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course textbook, if available)	Principles of Biostatistics – Pagano Biostatistics: The Bare Essentials Textbook
Key References (Sources)	Biostatistics – Daniel
Recommended supplementary books and references (scientific journals, reports, etc.)	Basic Statistics for Health Sciences – Rosner
Electronic references, websites	All statistics-related references relevant to anesthesia and intensive care

Course Description Template

1. Course Title
Arabic Language 2

2. Course Code	
TU-ANE-228	
3. Semester / Academic Year	
second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (1) (15)unit	
7. Name of Course Instructor	
Assist.LecHisham Taha .	
8. Course Objectives	
Course Objectives	Course Objectives • General Objective: Students will become familiar with grammatical and rhetorical expression. • Specific Objective: Students will learn about linguistic information and corrections in accordance with the rules of the Arabic language.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update vocabulary and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new vocabulary not exceeding 20% of the content of the corresponding curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
10.Course Structure	

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory	Understanding the Material	Quranic Expression - Grammatical analysis in terms of sentence and text structure - Rhetorical analysis in terms of artistic impact - Reference: The Book of Qur'anic Expression by Dr. Fadel al-Samara'i	Theoretical Lecture	Theoretical Quizzes
3	2 hours of theory	Understanding the Material	The Poet Badr Shaker al-Sayyab	Theoretical Lecture	Theoretical Quizzes
4	2 hours of theory	Understanding the Material	Original inflectional markers - Dhamma - Fathah - Kasra - Secondary Inflection Marks - Waw - Alif - Ya	Theoretical Lecture	Theoretical Quizzes
5	2 hours of theory	Understanding the Material	Noun Phrase - Subject and Predicate - Types of Subjects - Types of Predicates	Theoretical Lecture	Theoretical Quizzes
6	2 hours of theory	Understanding the material	and related topics	Theoretical Lecture	Theoretical Quizzes
7	2 hours of theory	Understanding the material	- The difference between “innā” and “annā” - The difference between “أَنْ” and “إِنْ”	Theoretical Lecture	Theoretical Quizzes
8	2 hours of theory	Understanding the material	Kan and her sisters	Theoretical Lecture	Theoretical Quizzes
9	2 hours of theory	Understanding the Material	The Five Verbs	Theoretical Lecture	Theoretical Quizzes
10	2 hours of theory	Understanding the Material	Grammatical Errors, Part 2	Theoretical Lecture	Theoretical Quizzes
11	2 hours of theory	Understanding the Material	Language Information	Theoretical Lecture	Theoretical Quizzes

			• Synonyms and antonyms • Linguistic Differences • Grammatical Equivalents		
12	2 hours of theory	Understanding the Material	The dual form and its inflections	Theoretical Lecture	Theoretical Quizzes
13–14	2 hours of theory	Understanding the Material	Types of Plural Forms • Masculine sound nouns • Plural of the sound feminine noun • Plural of the broken form	Theoretical Lecture	Theoretical Quizzes
15	2 hours of theory	Understanding the Material	Grammar Structure • Arabic grammar rules on a teaching board Grammatical corrections	Theoretical Lecture	Theoretical Quizzes

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 40% – through quizzes, assignments, and class participation.
- Final Grade (60%), which includes:
 - Theoretical: 60% – through a final written exam to assess overall understanding of the material..

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course materials, if available)	Arabic Language Textbooks
Primary References (Sources)	All relevant resources
Recommended supplementary books and references (scholarly journals, reports, etc.)	Arabic Grammar by Muhammad Thiab.
Electronic references, websites	All references related to the Arabic language that are useful for anesthesia and intensive care

Third stage 3

Course Description Template

1. Course Title

Anesthesia 1	
2. Course Code	
TU-ANE-301	
3. Semester / Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (105)	
7. Name of Course Instructor	
Dr. Ahmed Qais Aziz Dr. Mustafa Saad Majid Dr. Tabarak Hamid Jaafar	
8. Course Objectives	
Course Objectives	:Course Objectives :General Objective To familiarize students with anesthetic agents and equipment, patient preparation before surgery, monitoring during surgery, and post-anesthesia care. Specific Objective: By the end of the year, students will be able to: Identify the different types of anesthetic agents. Administer anesthetic doses in the required amounts. Provide patient care appropriate to the nature of the procedure. Monitor the patient during the procedure and upon awakening.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.

2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated educational environment based on blended learning; encourage scientific research; and collaborate with universities and international scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical work	Understanding the Material	Regional Anesthesia	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3–4	2 hours of theory 4 hours of practical work	Understanding the Material	Post-Anesthesia Recovery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5–6	2 hours of theory 4 hours of practical work	Understanding the Material	Common Perioperative Complications	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7–8	2 hours of theory 4 hours of practical work	Understanding the Material	Renal Disease and Anesthesia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9–10	2 hours of theory 4 hours of practical work	Understanding the Material	Liver Disease and Anesthesia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11–12	2 hours of theory 4 hours of practical work	Understanding the Material	Hematological Diseases and Anesthesia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	2 hours of theory	Understanding the Material	Anesthesia for Laparoscopic Surgery	Theoretical lecture Practical	Theoretical Quizzes

	4 hours of practical work			application in the lab	Practical Lab Tests
14	2 hours of theory 4 hours of practical training	Understanding the Material	Anesthesia for Day Case Surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	2 hours of theory 4 hours of practical training	Understanding the Material	Out-of-Operating-Room Anesthesia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through short exams, assignments, and class participation.
 - Practical: 15% – through ongoing assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Miller's Anesthesia
Primary References (Sources)	Barash Clinical Anesthesia
Recommended supplementary books and references (scientific journals, reports, etc.)	Morgan & Mikhail Clinical Anesthesiology
Electronic references, websites	All references related to anesthesia that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name	
Fundamentals of Critical Care1	
2. Course Code	
TU-ANE-302	
3. Semester / Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (90)	
7. Name of Course Instructor	
Lec.Dr. Ihab Qais Jalil Lec.Dr. Ahmed Abbas Fadl	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: The course aims to provide students with knowledge of the fundamentals of using and maintaining intensive care equipment in intensive care units. Specific Objectives: 1. By the end of the year, students will be able to maintain the equipment. 2. Operate the equipment. 3. Dismantle and reassemble the equipment.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments,

while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.

2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical training	Understanding the Material	ICU organization, design, admission, and discharge criteria	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3–4	2 hours of theory 4 hours of practical work	Understanding the material	Transport of critically ill patients	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5–6	2 hours of theory 4 hours of practical work	Understanding the material	Preventive practices (occupational exposures, dietary and venous thromboembolism prophylaxis)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7–9	2 hours of theory 4 hours of practical training	Understanding the material	Sedation and analgesia in the ICU	Theoretical lecture Practical application of in the lab	Theoretical tests (quizzes) Practical lab tests
10–11	2 hours of theory 4 hours of practical training	Understanding the material	Oxygen therapy and noninvasive ventilation	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
12	2 hours of theory 4 hours of practical work	Understanding the material	Mechanical ventilation (indications, modes of ventilation, weaning and complications)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests

13	2 hours of theory 4 hours of practical work	Understanding the Material	Nutrition in the ICU	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14–15	2 hours of theory 4 hours of practical training	Understanding the Material	Clinical monitoring in the ICU (respiratory monitoring, cardiovascular monitoring, hemodynamic monitoring, and cranial monitoring)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course textbook, if available)	Marino's The ICU Book
Primary References (Sources)	Irwin and Rippe's Intensive Care Medicine
Recommended supplementary books and references (scientific journals, reports, etc.)	Oxford Handbook of Critical Care
Electronic references, websites	All references related to the fundamentals of critical care that pertain to anesthesia and critical care

Course Description Template

1. Course Name	
Anesthesia Machine Techniques 1	
2. Course Code	
TU-ANE-303	
3. Semester / Academic Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and integrated e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (120)	
7. Name of Course Instructor	
Dr. Ahmed Salam Dr. Omar Eid Galal Dr. Sarah Samir	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: To introduce all medical devices used in anesthesia. Specific Objectives: By the end of the academic year, students will be able to: 1. Use all types of anesthesia equipment. 2. Maintain and service all anesthesia machines. To familiarize students with all components of medical devices used in anesthesia and their techniques.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.

2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10. Course Structure

Week	Hours	Expected Learning Outcomes	Name of Unit or Topic	Learning Method	Assessment Method
1–5	2 hours of theory 4 hours of practical training	Understanding the material	Airway management devices: supraglottic devices, all types of laryngeal masks, i-Gel, Cobra Airway, Combetube, etc.	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
6–8	2 hours of theory 4 hours of practical work	Understanding the material	Endotracheal tubes for special purposes, double-lumen tubes	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9–11	2 hours of theory 4 hours of practical training	Understanding the material	Laryngoscope modification, intubation aids, emergency airway	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12–14	2 hours of theory 4 hours of practical work	Understanding the material	Humidifier and Nebulizer: Definition, Importance of Humidification Classification and examples of humidifiers and nebulizers	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical lab tests
15	2 hours of theory 4 hours of practical work	Understanding the material	Medical suction apparatus, components, selection, standards, and testing	Theoretical lecture Practical application in the lab	Theoretical Tests (Quizzes) Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Understanding Anesthesia Equipment – Dorsch
Primary References (Sources)	Anesthesia Equipment – Ehrenwerth
Recommended supplementary books and references (scientific journals, reports, etc.)	Clinical Anesthesia Procedures
Electronic references, websites	All relevant references Anesthesia equipment and techniques used in anesthesia and intensive care

Course Description Template

1. Course Name	
Internal Medicine 1	
2. Course Code	
TU-ANE-304	
3. Semester / Year	
first / 2025-2026	
4. Date this chapter was prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (90)	
7. Name of Course Instructor	
Lec.Dr. Rasha Hassan Abdullah Lec.Dr. Hanan Nouri Jalil	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: To familiarize students with all chronic diseases affecting the body's organs and blood. Specific Objectives: By the end of the year, students will be able to identify the signs and symptoms affecting: 1- The respiratory system. 2- The digestive system. 3- The renal and urinary systems and kidney diseases. .Liver diseases .4 .Endocrine diseases -5
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments,

while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.

2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical work	Understanding the material	Jaundice: classification, causes, clinical features, diagnosis.	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3	2 hours of theory 4 hours of practical work	Understanding the material	Peptic ulcer disease: Duodenal ulcer, Gastric ulcer	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical work	Understanding the material	Cerebrovascular accident	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5–6	2 hours of theory 4 hours of practical work	Understanding the material	Renal failure: acute renal failure, chronic renal failure: clinical features, investigations, and treatment.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	2 hours of theory 4 hours of practical work	Understanding the material	Ischemic heart diseases: clinical features, diagnosis, treatment	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8–9	2 hours of theory 4 hours of practical work	Understanding the Material	Arrhythmias: Cardiac Arrest.	Lecture and Practical Lab Session	Theoretical quizzes Practical lab tests

10–11	2 hours of theory 4 hours of practical work	Understanding the material	Heart failure: definition, classification, causes, precipitating factors, investigations, treatment.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12–13	2 hours of theory 4 hours of practical work	Understanding the material	Hypertension: definition, types (primary and secondary hypertension), complications, investigations, and treatment.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
14–15	2 hours of theory 4 hours of practical work	Understanding the material	Infections of the respiratory tract: upper respiratory tract infections. Lower respiratory tract infections: pneumonia.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (syllabus, if available)	Davidson's Principles and Practice of Medicine
Key References (Sources)	Harrison's Principles of Internal Medicine
Recommended supporting books and references (scientific journals, reports, etc.)	Kumar and Clark Clinical Medicine
Electronic resources, websites	All references related to internal medicine that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name	
Surgery	
2. Course Code	
TU-ANE-305	
3. Semester / Year	
first second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (2) credits (60)	
7. Name of Course Instructor	
Lec.Dr. Youssef Qadouri Hamad Lec.Dr. Jaafar Abu Talib Muhammad Saeed	
8. Course Objectives	
Course Objectives	:Course Objectives To familiarize students with the various organs of the body and the effects of injuries and diseases on them from an anatomical and pathophysiological perspective, as well as the resulting complications. Additionally, to teach students the symptoms and signs of these conditions and the basic principles for managing them. To familiarize students with conditions requiring surgical intervention and to explain the nature of such interventions (as they may encounter them during their work in operating rooms and intensive care units), with a focus on emergency cases. At this stage, the digestive, urinary, respiratory, and cardiovascular (heart) systems are studied.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following:

1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.
2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical work	Understanding the Material	Digestive Tract (GIT) General Review & Surgical Approaches	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 4 hours of practical work	Understanding the material	Salivary glands	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
3	2 hours of theory 4 hours of practical work	Understanding the Material	Investigation & Diagnosis (Diagnostic Imaging), Endoscopy & Tissue Diagnosis	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical work	Understanding the material	Esophagus	Theoretical lecture Practical application of the in the lab	Theoretical Tests (Quizzes) Practical lab tests
5	2 hours of theory	Understanding the material	Stomach & duodenum	Theoretical lecture	Theoretical quizzes

	4 hours of practical work			Practical application in the lab	Practical lab tests
6	2 hours of theory 4 hours of practical work	Understanding the Material	Liver	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	2 hours of theory 4 hours of practical work	Understanding the Material	Gallbladder & bile ducts	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 4 hours of practical work	Understanding the material	Spleen & pancreas	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9	2 hours of theory 4 hours of practical work	Understanding the material	Small and large intestine	Theoretical lecture Practical application in the lab	Theoretical Tests (Quizzes) Practical Lab Tests
10	2 hours of theory 4 hours of practical work	Understanding the material	Intestinal Obstruction & Fistula	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11	2 hours of theory 4 hours of practical work	Understanding the material	Vermiform appendix, peritoneum	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12	2 hours of theory 4 hours of practical work	Understanding the material	Rectum & anus	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	2 hours of theory 4 hours of practical work	Understanding the Material	Abdominal Wall & Hernia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14	2 hours of theory 4 hours of practical work	Understanding the Material	Breast	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	2 hours of theory 4 hours of practical work	Understanding the material	Burns, plastic surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (syllabus, if available)	Bailey & Love's Short Practice of Surgery
Key References (Sources)	Schwartz's Principles of Surgery
Recommended Books and Supporting References (Scientific Journals, Reports, etc.)	Sabiston Textbook of Surgery
Electronic references, websites	All references related to general surgery that pertain to anesthesia and intensive care

Course Description Template

1. Course Name	
Anesthesia 2	
2. Course Code	
TU-ANE-321	
3. Semester / Year	
second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (105)	
7. Name of Course Instructor	
Dr. Ahmed Qais Aziz Dr. Mustafa Saad Majid Dr. Tabarak Hamid Jaafar	
8. Course Objectives	
Course Objectives	:Course Objectives :General Objective To familiarize students with anesthetic agents and equipment, patient preparation before surgery, monitoring during surgery, and post-anesthesia care. Specific Objective: By the end of the year, students will be able to: Identify the different types of anesthetic agents. Administer anesthetic doses in the required amounts. Provide patient care appropriate to the nature of the procedure. Monitor the patient during the procedure and upon awakening.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following:

1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.
2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical work	Understanding the material	Preoperative assessment	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2–3	2 hours of theory 4 hours of practical work	Understanding the Material	Anesthesia for Obstetrics and Gynecology	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical training	Understanding the Material	Anesthesia for Pediatric Patients	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the Material	Anesthesia for Geriatric Patients	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	2 hours of theory 4 hours of practical training	Understanding the Material	Anesthesia for Obese Patients	Lecture and Practical Application in the Lab	Theoretical quizzes Practical lab tests

7	2 hours of theory 4 hours of practical training	Understanding the Material	Anesthesia for Thoracic Surgery	Theoretical Lecture Practical Application of " " in the Lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 4 hours of practical work	Understanding the Material	Anesthesia for Ophthalmic Surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9–10	2 hours of theory 4 hours of practical work	Understanding the Material	Anesthesia for Orthopedic Surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11	2 hours of theory 4 hours of practical work	Understanding the Material	Anesthesia for Urologic Surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12–13	2 hours of theory 4 hours of practical work	Understanding the Material	Anesthesia for Neurosurgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14	2 hours of theory 4 hours of practical work	Understanding the Material	Anesthesia for ENT	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
15	2 hours of theory 4 hours of practical work	Understanding the Material	Controlled Hypotensive Anesthesia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.

- Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required Textbooks (Curriculum, if applicable)	Miller's Anesthesia
Primary references (sources)	Barash Clinical Anesthesia
Recommended supplementary books and references (scientific journals, reports, etc.)	Morgan & Mikhail Clinical Anesthesiology
Electronic references, websites	All references related to anesthesia that are relevant to anesthesia and intensive care

Course Description Template

1. Course Title	
Fundamentals of Critical Care 2	
2. Course Code	
TU-ANE-322	
3. Semester / Academic Year	
second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (90)	
7. Name of Course Instructor	
Dr. Ihab Qais Jalil Dr. Ahmed Abbas Fadl	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: The course aims to provide students with knowledge of the fundamentals of using and maintaining intensive care equipment in intensive care units. Specific Objectives: - 1. By the end of the year, students will be able to maintain the equipment. 2. Operate the equipment. 3. Dismantle and reassemble the equipment.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science

and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.

2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical work	Understanding the material	ICU organization, design, admission, and discharge criteria	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3	2 hours of theory 4 hours of practical work	Understanding the material	Transport of critically ill patients	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4–5	2 hours of theory 4 hours of practical work	Understanding the material	Preventive practices (occupational exposures, dietary and venous thromboembolism prophylaxis)	Theoretical lecture Practical application in the lab	theoretical quizzes Practical lab tests
6	2 hours of theory 4 hours of practical work	Understanding the material	Sedation and Analgesia in the ICU	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical lab tests
7–8	2 hours of theory 4 hours of practical work	Understanding the material	Oxygen therapy and noninvasive ventilation	Theoretical lecture Practical application in the lab	Theoretical Tests (Quizzes) Practical Lab Tests

9–11	2 hours of theory 4 hours of practical work	Understanding the material	Mechanical ventilation (indications, modes of ventilation, weaning	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12–13	2 hours of theory 4 hours of practical work	Understanding the material	and complications)	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical lab tests
14–15	2 hours of theory 4 hours of practical work	Understanding the Material	Nutrition in the ICU	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
	2 hours of theory 4 hours of practical work	Understanding the material	Clinical monitoring in the ICU (respiratory monitoring, cardiovascular monitoring, hemodynamic and cranial monitoring)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic and practical achievements, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course textbook, if available)	Marino's The ICU Book
Primary References (Sources)	Irwin and Rippe's Intensive Care Medicine
Recommended Supporting Books and References (Scientific Journals, Reports, etc.)	Oxford Handbook of Critical Care
Electronic references, websites	All references related to the fundamentals of critical care that pertain to anesthesia and critical care

Course Description Template

1. Course Name	
Anesthesia Machine Techniques 2	
2. Course Code	
TU-ANE-323	
3. Semester / Academic Year	
second / 2025-2026	
4. Date this chapter was prepared	
1 May, 2026	
5. Available formats	
Lecture halls, teaching labs, smart boards, and integrated e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (120)	
7. Name of Course Instructor	
Dr. Ahmed Salam Dr. Omar Eid Galal Dr. Sarah Samir	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: To introduce all medical devices used in anesthesia. Specific Objectives. Specific Objectives: By the end of the academic year, students will be able to: 1. Use all types of anesthesia equipment. 2. Maintain and service all anesthesia equipment. To familiarize students with all components of medical devices used in anesthesia and their techniques.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science

and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.

2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–5	2 hours of theory 4 hours of practical work	Understanding the material	Modification of the breathing system (Lack, Bain, and Humphrey), circle breathing, and soda lime; procedure for checking the breathing system	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
6	2 hours of theory 4 hours of practical training	Understanding the material	Manual resuscitator, components, and other uses for the manual resuscitator	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7–10	2 hours of theory 4 hours of practical training	Understanding the material	Anesthesia ventilator, principle of operation, and types of ventilators (Manley MP3, Penlon ventilator, and high-frequency jet ventilator)	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical lab tests
11–12	2 hours of theory 4 hours of practical work	Understanding the material	Equipment for local anesthesia: spinal, epidural, and major nerve blocks	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical lab tests
13	2 hours of theory 4 hours of practical work	Understanding the material	Peripheral nerve stimulator and nerve block stimulator	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
14	2 hours of theory	Understanding the Material	Defibrillator and pacemaker	Theoretical lecture	Theoretical quizzes

	4 hours of practical training			Practical application in the lab	Practical lab tests
15	2 hours of theory 4 hours of practical work	Understanding the material	Blood warmer	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Understanding Anesthesia Equipment – Dorsch
Primary References (Sources)	Anesthesia Equipment – Ehrenwerth
Recommended supplementary books and references (scientific journals, reports, etc.)	Clinical Anesthesia Procedures
Electronic references, websites	All relevant references Anesthesia equipment and techniques used in anesthesia and intensive care

Course Description Template

1. Course Name	
Internal Medicine 2	
2. Course Code	
TU-ANE-324	
3. Semester/Year	
second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (90)	
7. Name of Course Instructor	
Lec.Dr. Rasha Hassan Abdullah Lec.Dr. Hanan Nouri Jalil	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: To familiarize students with all chronic diseases affecting the body's organs and blood. Specific Objectives: By the end of the year, students will be able to identify the signs and symptoms affecting: 1- The respiratory system. 2- The digestive system. 3- The renal and urinary systems and kidney diseases. .Liver diseases .4 .Endocrine diseases -5
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments,

while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.

2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical work	Understanding the Material	Pulmonary T.B.	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3–4	2 hours of theory 4 hours of practical work	Understanding the material	Chronic obstructive pulmonary diseases: chronic bronchitis, emphysema, asthma	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5–6	2 hours of theory 4 hours of practical work	Understanding the material	Tumors of the Lung	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7–8	2 hours of theory 4 hours of practical work	Understanding the material	Vascular lung disease: pulmonary thromboembolism.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9–10	2 hours of theory 4 hours of practical work	Understanding the material	Respiratory failure: definition, types, management.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11	2 hours of theory 4 hours of practical work	Understanding the material	Diseases of the pleura: pleural effusion: types, causes, investigation, treatment	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

12–13	2 hours of theory 4 hours of practical work	Understanding the material	Diabetes mellitus: definition, clinical features, complications, and treatment.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14	2 hours of theory 4 hours of practical work	Understanding the material	Cushing syndrome: diagnosis, clinical features, investigations, and treatment	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
15	2 hours of theory 4 hours of practical work	Understanding the material	Disturbances of water and electrolytes.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through ongoing assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (syllabus, if available)	Davidson's Principles and Practice of Medicine
Primary References (Sources)	Harrison's Principles of Internal Medicine
Recommended supporting books and references (scientific journals, reports, etc.)	Kumar and Clark Clinical Medicine
Electronic resources, websites	All references related to internal medicine that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name	
Surgery 2	
2. Course Code	
TU-ANE-325	
3. Semester / Year	
second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (2) (60)units	
7. Name of Course Instructor	
Dr. Youssef Qadouri Hamad Dr. Jaafar Abu Talib Muhammad Saeed	
8. Course Objectives	
Course Objectives	:Course Objectives To familiarize students with the various organs of the body and the effects of injuries and diseases on them from an anatomical and pathophysiological perspective, as well as the resulting complications. Additionally, to teach students the symptoms and signs of these conditions and the basic principles for managing them. To familiarize students with conditions requiring surgical intervention and to explain the nature of such interventions (as they may encounter them during their work in operating rooms and intensive care units), with a focus on emergency cases. At this stage, the digestive, urinary, respiratory, and cardiovascular (heart) systems are studied.
9. Teaching and Learning Strategies	
Strategy	

The program relies on various types of planning to achieve the course objectives through the following:

1. **Short-Term Planning:** Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.
2. **Medium-Term Planning:** Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence.
3. **Long-Term Planning:** Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	1 hours of theory 3 hours of practical work	Understanding the Material	Trauma to the , kidneys, ureter, bladder, and urethra	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	1 hours of theory 3 hours of practical work	Understanding the material	Hydronephrosis, Urinary Stones, UTI	Theoretical lecture Practical application in the lab	Theoretical Tests (Quizzes) Practical Lab Tests
3	1 hours of theory 3 hours of practical work	Understanding the Material	DVT & pulmonary embolism	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	1 hours of theory 3 hours of practical work	Understanding the Material	Bariatric surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

5	1 hours of theory 3 hours of practical work	Understanding the material	Gynecology (hysterectomy, cesarean section)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	1 hours of theory 3 hours of practical work	Understanding the Material	Urogenital Tract in Males: Prostate, Testes, Penis	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical lab tests
7	1 hours of theory 3 hours of practical work	Understanding the material	Thoracic Surgery: Respiratory Pathophysiology & General Review	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
8	1 hours of theory 3 hours of practical work	Understanding the Material	Trauma to the Thorax: Rib Fractures, Flail Chest	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9	1 hours of theory 3 hours of practical work	Understanding the material	Pneumothorax, Hemothorax	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
10	1 hours of theory 3 hours of practical work	Understanding the Material	Pleural Effusion, Empyema	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11	1 hours of theory 3 hours of practical work	Understanding the Material	Chest Tube: Application & Management	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
12	1 hours of theory 3 hours of practical work	Understanding the Material	Pediatric Surgery	Theoretical Lecture Practical Application in the Lab	Theoretical Tests (Quizzes) Practical Lab Tests
13	1 hours of theory 3 hours of practical work	Understanding the Material	Types of Thoracic Operations	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14	1 hours of theory 3 hours of practical work	Understanding the Material	Osteomyelitis	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	1 hours of theory	Understanding the material	Orthopedic surgery, fractures, and dislocations	Theoretical lecture Practical	Theoretical quizzes Practical lab tests

	3 hours of practical work			application in the lab	
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11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (syllabus, if available)	Bailey & Love's Short Practice of Surgery
Key References (Sources)	Schwartz's Principles of Surgery
Recommended supplementary books and references (scientific journals, reports, etc.)	Sabiston Textbook of Surgery
,Electronic References Websites	All references related to general surgery that pertain to anesthesia and intensive care

Fourth stage

4

Course Description Template

1. Course Name	
Advanced Anesthesia 1	
2. Course Code	
TU-ANE-401	
3. Semester / Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
(105) hours / (4) units	
7. Name of the Course Instructor	
Lec.Dr. Alaa Hussein Lec.Dr. Ahmed Qais Aziz	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: To familiarize students with how to administer anesthetic doses to patients. Specific Objectives: By the end of the year, students will be able to: 1. Administer anesthesia for specific medical conditions. 2- Manage complications that may occur before and after anesthesia. 3- Identify methods of patient care in the event of an emergency. 4- Continuously monitor patients in the operating rooms.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding

	departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 5 hours of practical work	Understanding the material	Anesthesia for emergency operations.	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3–4	2 hours of theory 5 hours of practical work	Understanding the material	Endotracheal intubation—difficult intubation + guidelines for managing difficult intubation.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 5 hours of practical work	Understanding the material	Emergency Airway Management for Trauma Patients / Failed Intubation Drill	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	2 hours of theory 5 hours of practical work	Understanding the material	Anesthetic Management of Patients with Ischemic Heart Disease Undergoing Non-Cardiac Surgery.	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical lab tests
7	2 hours of theory 5 hours of practical work	Understanding the Material	Anesthetic Management of Patients with Valvular Heart Disease	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

8	2 hours of theory 5 hours of practical work	Understanding the Material	Anesthetic Management of Patients with Heart Failure / Anesthetic Management of Patients with Cardiomyopathy	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
9	2 hours of theory 5 hours of practical work	Understanding the Material	Anesthetic Management of Patients with Asthma, COPD, and Restrictive Pulmonary Disease	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10	2 hours of theory 5 hours of practical work	Understanding the Material	Perioperative Management of Patients with Aspiration Pneumonia/Pulmonary Embolism	Lecture and Practical Laboratory Session	Theoretical Quizzes Practical lab tests
11–12	2 hours of theory 5 hours of practical work	Understanding the Material	Hematological Diseases and Anesthesia	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
13	2 hours of theory 5 hours of practical work	Understanding the material	Electroconvulsive therapy (ECT) and anesthesia	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical Lab Tests
14	2 hours of theory 5 hours of practical work	Understanding the Material	Anesthetic Management for Thyroidectomy/Exploratory Laparotomy	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	2 hours of theory 5 hours of practical work	Understanding the Material	Anesthesia & Diabetes Mellitus	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Miller's Anesthesia
Primary References (Sources)	Barash Clinical Anesthesia
Recommended supplementary books and references (scientific journals, reports, etc.)	Stoelting's Anesthesia and Co-Existing Disease
,Electronic references websites	All references related to anesthesia that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name	
Advance Anesthesia Machine Techniques 1	
2. Course Code	
TU-ANE-402	
3. Semester / Academic Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (120)	
7. Name of the Course Instructor	
Lec.Dr. Mariam Fadel Lec.Dr. Omar Eid Galal	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: To introduce all medical devices used in anesthesia. Specific Objectives. Specific Objectives: By the end of the academic year, students will be able to: 1. Use all types of anesthesia equipment. 2. Maintain and service all anesthesia equipment. To familiarize students with all components of medical devices used in anesthesia and their techniques.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence.

3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–7	2 hours of theory 4 hours of practical training	Understanding the Material	Physiological monitoring: principles of monitoring, classification of monitoring equipment Invasive (Doppler) Monitoring of blood pressure, invasive (CVP) and non-invasive (arterial blood pressure) Pulse oximeter ETCO₂ ECG and temperature monitoring equipment	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical Lab Tests
8–9	2 hours of theory 4 hours of practical work	Understanding the material	Monitoring for gases, inspired O₂ concentration, nitrous oxide, and volatile anesthetic agent concentration analyzer	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
10	2 hours of theory 4 hours of practical training	Understanding the Material	Measurement of gases in blood (blood gas analyzer)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11–12	2 hours of theory 4 hours of practical work	Understanding the material	Measurement of respiratory volume (Wright respirometer), measurements of volume, flow, and pressure, force and pressure	Theoretical lecture on the practical application of the in the lab	Theoretical quizzes Practical lab tests
13–14	2 hours of theory 4 hours of practical training	Understanding the material	Electrical hazards and their prevention, and accidents associated with the main electrical supply Risk management: principles of risk management, risk reduction related to equipment Surgical diathermy; accidents due to the use of diathermy	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
15	2 hours of theory	Understanding the Material	Hemofiltration	Theoretical lecture	Theoretical quizzes

	4 hours of practical work			Practical application in the lab	Practical Lab Tests
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11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess general understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between the theoretical and practical components.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Understanding Anesthesia Equipment – Dorsch
Primary References (Sources)	Anesthesia Equipment – Ehrenwerth
Recommended supplementary books and references (scientific journals, reports, etc.)	Clinical Anesthesia Procedures
Electronic references, websites	All relevant references Anesthesia equipment and techniques used in anesthesia and intensive care

Course Description Template

1. Course Name	
Intensive Care Techniques1	
2. Course Code	
TU-ANE-403	
3. Semester/Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (90)	
7. Name of Course Instructor	
Lec.Dr. Ayman Jaafar Lec.Dr. Sarah Samir	
8. Course Objectives	
Course Objectives	:Course Objectives :General Objective This course aims to provide students with knowledge of the fundamentals of the equipment used in intensive care units, as well as its operation and maintenance. Specific Objectives: By the end of the year, students will be able to: 1. Operate all advanced patient monitoring and care devices used in intensive care units. 2. Operate and maintain equipment in intensive care units. 3. Identify certain medical conditions in intensive care and understand how to manage and monitor them. 4. Know how to intervene in certain emergency and critical situations within the intensive care unit.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following:

4. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.
5. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence.
6. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical work	Understanding the material	Pulmonary Embolisms and Pulmonary Edema	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3–4	2 hours of theory 4 hours of practical work	Understanding the material	Acute Renal Failure and CRRT	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical training	Understanding the Material	sepsis and septic shock	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6–7	2 hours of theory 4 hours of practical work	Understanding the material	Multiple trauma (severe multiple trauma, chest injury, spinal cord injury)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8–9	2 hours of theory 4 hours of practical work	Understanding the material	Environmental injuries (submersion, burns, thermal injury, and envenomation)	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical lab tests

10	2 hours of theory 4 hours of practical work	Understanding the material	Infection and Antimicrobial Therapy	Theoretical lecture Practical application of " " in the lab	Theoretical tests (quizzes) Practical lab tests
11–12	2 hours of theory 4 hours of practical training	Understanding the material	ICU Care After Cardiac Surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	2 hours of theory 4 hours of practical work	Understanding the material	Transport of critically ill patients	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
14–15	2 hours of theory 4 hours of practical work	Understanding the Material	Nutrition in the ICU	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course textbook, if available)	Marino's The ICU Book
Primary References (Sources)	Irwin and Rippe's Intensive Care Medicine
Recommended supplementary books and references (scientific journals, reports, etc.)	Oxford Handbook of Critical Care

Electronic references, websites	All references related to the fundamentals of intensive care as applied to anesthesia and intensive care
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Course Description Template

1. Course Name	
Advanced Internal Medicine 1	
2. Course Code	
TU-ANE-404	
3. Semester/Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (3) (75)units	
7. Name of Course Instructor	
Lec.Dr. Haider Salem Lec.Dr. Rasha Hassan Abdullah	
8. Course Objectives	
Course Objectives	Course Objectives To familiarize students with the various organs of the body and the effects of injuries and diseases on them from an anatomical and pathological perspective, as well as the resulting complications. It also teaches students the symptoms and signs of these conditions and the basic frameworks for managing them. It familiarizes students with conditions requiring intervention and clarifies the nature of such intervention (as they may encounter during their work in operating rooms and intensive care units), with a focus on emergency cases. At this stage, emergency medicine and military medicine are studied in detail, while the study of the remaining body systems (which began in the third stage) is continued. Students are introduced to the most critical and life-threatening conditions they may encounter during their hospital work, along with how to manage them.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following:

1. Short-Term Planning: Updating course content and curricula annually to align with recent advancements in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the compatible curriculum content.
2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 3 hours of practical work	Understanding the Material	Shock (types, pathophysiology, management)	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 3 hours of practical work	Understanding the material	Organization and Function of the Immune System	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
3	2 hours of theory 3 hours of practical work	Understanding the Material	Genetics and Disease	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 3 hours of practical work	Understanding the Material	Type & genetics of disease	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 3 hours of practical work	Understanding the Material	Principles of Critical Care Medicine	Theoretical lecture Practical	Theoretical quizzes Practical lab tests

				application in the lab	
6	2 hours of theory 3 hours of practical work	Understanding the Topic	Autoimmune Disease	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	2 hours of theory 3 hours of practical work	Understanding the material	Ophthalmic diseases	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 3 hours of practical work	Understanding the Material	Principles of General Medicine	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9	2 hours of theory 3 hours of practical work	Understanding the Material	Diseases of the Nerve and Muscle	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10	2 hours of theory 3 hours of practical work	Understanding the Material	Disorders of the Spine and Spinal Cord	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11	2 hours of theory 3 hours of practical work	Understanding the material	Heavy metal poisoning	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12	2 hours of theory 3 hours of practical work	Understanding the Material	Blood Diseases	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	2 hours of theory 3 hours of practical work	Understanding the Material	Infection of the nervous system	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14	2 hours of theory 3 hours of practical work	Understanding the material	Endocrinology: Pituitary Gland	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	2 hours of theory 3 hours of practical work	Understanding the Material	Thyroid gland	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess general understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between the theoretical and practical components.

12. Learning and Teaching Resources

Required textbooks (syllabus, if available)	Harrison's Principles of Internal Medicine
Primary References (Sources)	Davidson's Principles and Practice of Medicine
Recommended Supporting Books and References (Scientific Journals, Reports, etc.)	Kumar and Clark Clinical Medicine
Electronic references, websites	All references related to internal medicine that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name	
Pain Medicine	
2. Course Code	
TU-ANE-405	
3. Semester/Year	
first / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (3) (75)units	
7. Name of Course Instructor	
Lec.Dr. Haider Salem Lec.Dr. Rasha Hassan Abdullah	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: To familiarize students with the various types of pain that may affect the human body, ranging from acute and chronic pain Specific Objective: By the end of the academic year, students will be able to: 1. Recognize pain as a disease rather than merely a symptom, and alleviate the patient's suffering using various possible means. 2- Apply various pain management techniques, whether pharmacological or non-pharmacological, such as physical therapy, behavioral therapy, and acupuncture. 3- Use advanced methods in treating pain conditions, such as spinal cord or brain stimulation or the implantation of a pain pump

9. Teaching and Learning Strategies

Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.
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10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 3 hours of practical work	Understanding the material	Anatomy of the pain processing system. Pathophysiology of pain	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 3 hours of practical work	Understanding the material	History and physical examination of a patient with pain; Diagnosis of pain.	Theoretical lecture and practical application in the lab	Theoretical Tests (Quizzes) Practical Lab Tests
3	2 hours of theory 3 hours of practical work	Understanding the material	Pain clinic instruments. Anesthesia for pain management Procedures.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory	Understanding the material	Acute pain management strategies.	Theoretical lecture Practical	theoretical quizzes Practical lab tests

	3 hours of practical work		Radiation safety in pain procedures.	application in the lab	
5	2 hours of theory 3 hours of practical work	Understanding the material	Radiofrequency in pain management Physiotherapy for pain management.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	2 hours of theory 3 hours of practical work	Understanding the material	Prolotherapy for pain management. Acupuncture therapy for pain management.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	2 hours of theory 3 hours of practical work	Understanding the material	Psychotherapy for pain management. Headache.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 3 hours of practical work	Understanding the material	Neck pain. Pain management procedures for neck pain.	Theoretical lecture and practical application in the lab	Theoretical quizzes Practical Laboratory Tests
9	2 hours of theory 3 hours of practical work	Understanding the material	Pain management procedures for neck pain and chest pain.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10	2 hours of theory 3 hours of practical work	Understanding the material	Pain management procedures for chest pain and cardiac pain.	Theoretical lecture Practical application in the lab	Theoretical tests (quizzes) Practical exams in the lab
11	2 hours of theory 3 hours of practical work	Understanding the material	Back pain; pain management techniques for back pain	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12	2 hours of theory 3 hours of practical work	Understanding the material	Techniques for managing pelvic and sacral pain	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	2 hours of theory 3 hours of practical work	Understanding the Material	Complications of pain management procedures and pharmacology for pain management	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14	2 hours of theory 3 hours of practical work	Understanding the material	phantom pain, occupational back pain	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

15	2 hours of theory 3 hours of practical work	Understanding the material	Advanced pain management techniques Spinal cord stimulator techniques In pain management, intrathecal pump techniques in pain management	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
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11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Wall & Melzack's Textbook of Pain
Primary References (Sources)	Raj's Practical Management of Pain
Recommended Supporting Books and References (Scientific Journals, Reports, etc.)	Bonica's Management of Pain
Electronic references, websites	All references related to internal medicine that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name	
Professional Ethics	
2. Course Code	
TU-ANE-406	
3. Semester / Year	
first second / 2025-2026	
4. Date this chapter was prepared	
1 May, 2026	
5. Available formats	
Lecture halls, teaching labs, smart boards, and integrated e-learning platforms.	
6. Number of Class Hours / Number of Units	
)30) / hours (2units (	
7. Name of Course Instructor	
Lec.Dr. Haider Salem Lec.Dr. Rasha Hassan Abdullah	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: The course aims to introduce students in technical colleges to professional ethics relevant to their technical specializations and to equip them with ethical guidelines that reinforce their commitment to these principles in their anticipated field of work after graduation. Specific Objectives: Set by the course instructors (as behavioral objectives) within the framework of the lesson plan for each individual lecture
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following:

1. Short-Term Planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.
2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting professors, and conducting academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory	Understanding the Material	Ethics	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory	Understanding the material		Theoretical Lecture Practical Application of in the Lab	Theoretical quizzes Practical Lab Tests
3	2 hours of theory	Understanding the material		Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
4	2 hours of theory	Understanding the material		Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
5	2 hours of theory	Understanding the material		Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests

6	2 hours of theory	Understanding the material		Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
7	2 hours of theory	Understanding the material		Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
8	2 hours of theory	Understanding the material		Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
9-10	2 hours of theory	Understanding the material		Theoretical lecture Practical application in the lab	Theoretical Tests (Quizzes) Practical Lab Tests
11-12	2 hours of theory	Understanding the material		Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
12-13	2 hours of theory	Understanding the material		Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
14-15	2 hours of theory	Understanding the material		Theoretical Lecture Practical Application of in the Lab	Theoretical quizzes Practical Lab Tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources	
Required Textbooks (Syllabus, if available)	Medical Ethics Today – BMA
Primary References (Sources)	Principles of Biomedical Ethics – Beauchamp & Childress
Recommended supplementary books and references (scientific journals, reports, etc.)	Oxford Handbook of Medical Ethics
Electronic references, websites	All references related to internal medicine that are relevant to anesthesia and intensive care

Course Description Template

1. Course Title	
Advance Anesthesia 2	
2. Course Code	
TU-ANE-421	
3. Semester / Academic Year	
second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (105)	
7. Name of Course Instructor	
Lec.Dr. Alaa Hussein Lec.Dr. Ahmed Qais Aziz	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: To familiarize students with how to administer anesthetic doses to patients. Specific Objectives: By the end of the year, students will be able to: 1. Identify all types of anesthesia equipment. 2- Administer anesthetic agents. 3- Resuscitate a patient. 4- Appropriately manage patient care in the event of an emergency.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and

	organizing academic exchange visits to enhance academic excellence.
	3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical training	Understanding the Material	Anesthetic Management for Craniotomy in Acute Head Injury / Intracranial Tumor Debulking	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3	2 hours of theory 4 hours of practical training	Understanding the Material	Anesthetic Management for Bronchoscopy/Pneumectomy	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical training	Understanding the Material	Anesthetic Management for Aortic Aneurysm/Peripheral Vascular Procedures	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the Material	Hypertension and Anesthesia	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
6	2 hours of theory 4 hours of practical work	Understanding the material	Pre-eclampsia/eclampsia & anesthesia.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	2 hours of theory 4 hours of practical training	Understanding the material	Anesthesia management for patients in shock.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 4 hours of practical training	Understanding the Material	Anesthetic Management for Abruptio Placentae, Placenta Previa, and Dilation and Curettage	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

9–10	2 hours of theory 4 hours of practical training	Understanding the Material	Anesthesia for Pregnant Patients Undergoing a Non-Obstetric Procedure/Anesthetic Management for Cervical Cerclage	Lecture and Practical Laboratory Session	Theoretical Quizzes Practical lab tests
11	2 hours of theory 4 hours of practical training	Understanding the material	Anesthetic Management for Posterior Spinal Reconstructive Surgery / Arthroscopy	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12	2 hours of theory 4 hours of practical training	Understanding the Material	Anesthetic Management for Total Hip Replacement/Total Knee Replacement	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	2 hours of theory 4 hours of practical training	Understanding the Material	Anesthetic Management for Pediatric Pyloric Stenosis/Circumcision	Theoretical lecture Practical application in the lab	Theoretical Quizzes Practical lab tests
14	2 hours of theory 4 hours of practical work	Understanding the material	Allergic reaction to anesthesia.	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	2 hours of theory 4 hours of practical training	Understanding the material	Sleeve gastrectomy and anesthesia	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.

- Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Miller's Anesthesia
Primary References (Sources)	Barash Clinical Anesthesia
Recommended supplementary books and references (scientific journals, reports, etc.)	Stoelting's Anesthesia and Co-Existing Disease
,Electronic references websites	All references related to anesthesia that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name	
Advance Anesthesia Machine Techniques 2	
2. Course Code	
TU-ANE-422	
3. Semester / Year	
second / 2025-2026	
4. Date this chapter was prepared	
1 May, 2026	
5. Available formats	
Lecture halls, teaching labs, smart boards, and integrated e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (120)	
7. Name of Course Instructor	
Lec.Dr. Mariam Fadel Lec.Dr. Omar Eid Jalal	
8. Course Objectives	
Course Objectives	:Course Objectives General Objective: To introduce all medical devices used in anesthesia. Specific Objectives. Specific Objectives: By the end of the academic year, students will be able to: 1. Use all types of anesthesia equipment. 2. Maintain and service all anesthesia equipment. To familiarize students with all components of medical devices used in anesthesia and their techniques.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments,

while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.

2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10. Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–4	2 hours of theory 4 hours of practical training	Understanding the material	Continuous-flow anesthetic machine: machine frame, compressed gas attachment, back bar Safety features of the anesthesia machine, common gas outlet, auxiliary gas sockets Electronics in the anesthesia machine, ergonomics and critical incidents, electronic control of the breathing system Maintenance of the anesthesia machine	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
5–8	2 hours of theory 4 hours of practical work	Understanding the material	Humphrey breathing system, circle breathing system, soda lime, and vaporizers in the circle breathing system; water canister	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
9–13	2 hours of theory 4 hours of practical training	Understanding the material	Advanced types of ventilators: principles and examples Bag-in-bottle ventilator, servo-U ventilator, venturi injector device, and ICU ventilator	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14–15	2 hours of theory 4 hours of practical training	Understanding the material	Checklist, Treatment, and Maintenance for Anesthesia Devices	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests

11. Course Assessment

The course is evaluated according to a rigorous system that ensures a fair and balanced assessment of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through short exams, assignments, and class participation.
 - Practical: 15% – through ongoing assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Understanding Anesthesia Equipment – Dorsch
Primary References (Sources)	Anesthesia Equipment – Ehrenwerth
Recommended supplementary books and references (scientific journals, reports, etc.)	Clinical Anesthesia Procedures
Electronic references, websites	All relevant references Anesthesia equipment and techniques used in anesthesia and intensive care

Course Description Template

1. Course Name	
Intensive Care Techniques 2	
2. Course Code	
TU-ANE-423	
3. Semester / Year	
second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (4) units (90)	
7. Name of Course Instructor	
Lec.Dr. Ayman Jaafar Lec.Dr. Sarah Samir	
8. Course Objectives	
Course Objectives	:General Objective This course aims to provide students with knowledge of the fundamentals of the equipment used in intensive care units, as well as its operation and maintenance. Specific Objective: By the end of the course, students will be able to: 1. Operate all advanced patient monitoring and care devices used in intensive care units. 2- Operate and maintain equipment in intensive care units. 3. Recognize certain clinical conditions in intensive care. 4. Know how to intervene in certain emergency and critical situations within the intensive care unit
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, hosting

professors, and conducting academic exchange visits to enhance academic excellence.

3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1–2	2 hours of theory 4 hours of practical training	Understanding the material	ICU Care After Neurovascular Surgery	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
3	2 hours of theory 4 hours of practical work	Understanding the Material	Upper Airway Obstructions in Children	Theoretical lecture Practical application in the lab	Theoretical Tests (Quizzes) Practical Lab Tests
4–5	2 hours of theory 4 hours of practical work	Understanding the material	Neuromuscular disorders (Guillain-Barré syndrome, myasthenia gravis)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6–7	2 hours of theory 4 hours of practical work	Understanding the material	CVA and brain death	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 4 hours of practical work	Understanding the material	Respiratory infections (H1N1, severe pneumonia)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9–10	2 hours of theory 4 hours of practical work	Understanding the material	Endocrine emergencies (adrenal crisis and thyroid storm)	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11–12	2 hours of theory 4 hours of practical work	Understanding the material	Meningitis and Encephalitis	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13–15	2 hours of theory 4 hours of practical work	Understanding the material	Toxicology emergencies (paracetamol, aspirin, opioids, beta-blockers,	Theoretical lecture Practical	Theoretical quizzes Practical Lab Tests

			organophosphates, and CO poisoning)	application in the lab	
11. Course Assessment					
The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows: • Semester Grade (40%), which includes: • Theoretical: 25% – through quizzes, assignments, and class participation. • Practical: 15% – through continuous assessment of performance in the laboratory or practical application. • Final Grade (60%), which includes: • Theoretical: 35% – through a final written exam to assess general understanding of the material. • Practical: 25% – through a practical or clinical exam to assess applied proficiency. This system is applied to both semesters to ensure consistency in assessment between the theoretical and practical components.					
12. Learning and Teaching Resources					
Required textbooks (course textbook, if available)			Marino's The ICU Book		
Primary References (Sources)			Irwin and Rippe's Intensive Care Medicine		
Recommended supplementary books and references (scientific journals, reports, etc.)			Oxford Handbook of Critical Care		
Electronic references, websites			All references related to the fundamentals of critical care that pertain to anesthesia and critical care		

Course Description Template

1. Course Name	
Advanced Internal Medicine 2	
2. Course Code	
TU-ANE-424	
3. Semester / Academic Year	
second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (3) (75)units	
7. Name of Course Instructor (list all names if applicable)	
Lec.Dr. Haider Salem Lec.Dr. Rasha Hassan Abdullah	
8. Course Objectives	
Course Objectives	Course Objectives To familiarize students with the various organs of the body and the effects of injuries and diseases on them from an anatomical and pathological perspective, as well as the resulting complications. It also teaches students the symptoms and signs of these conditions and the basic frameworks for managing them. It familiarizes students with conditions requiring intervention and clarifies the nature of such intervention (as they may encounter during their work in operating rooms and intensive care units), with a focus on emergency cases. At this stage, emergency medicine () and military medicine are studied in detail, while the study of the remaining body systems (which began in the third stage) is continued. Students are introduced to the most critical and life-threatening conditions they may encounter during their hospital work, along with how to manage them.
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.

2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical work	Understanding the material	Parathyroid Gland & Calcium Balance.	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 4 hours of practical work	Understanding the material	Adrenal gland	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
3	2 hours of theory 4 hours of practical training	Understanding the Material	D.M.: Complications, Management, Preparation for Surgery	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical work	Understanding the material	Preparation of a patient with obstructive jaundice	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the material	Preparation of a patient with portal hypertension due to cirrhosis	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
6	2 hours of theory 4 hours of practical work	Understanding the material	Management of hematemesis and melena	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	2 hours of theory 4 hours of practical work	Understanding the material	Management of hemopneumothorax and flail chest	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

8	2 hours of theory 4 hours of practical work	Understanding the material	Management of respiratory failure, ARDS	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9	2 hours of theory 4 hours of practical work	Understanding the material	Management of coagulopathy, DIC	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10	2 hours of theory 4 hours of practical work	Understanding the material	Management of Septicemia, MOFS	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11	2 hours of theory 4 hours of practical work	Understanding the Material	Electrical injury	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
12	2 hours of theory 4 hours of practical work	Understanding the Material	Coma and Other Disturbances of Consciousness	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
13	2 hours of theory 4 hours of practical work	Understanding the material	Venoms, Bites, and Stings	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14	2 hours of theory 4 hours of practical training	Understanding the Material	Anaphylaxis and Transfusion Reactions	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
15	2 hours of theory 4 hours of practical work	Understanding the Material	Principles of drug therapy and management of poisoning	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.
 - Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall

understanding of the material.

- Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Harrison's Principles of Internal Medicine
Primary References (Sources)	Davidson's Principles and Practice of Medicine
Recommended Supporting Books and References (Scientific Journals, Reports, etc.)	Kumar and Clark Clinical Medicine
Electronic references, websites	All references related to internal medicine that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name	
Emergency Medicine	
2. Course Code	
TU-ANE-425	
3. Semester / Year	
first second / 2025-2026	
4. Date Prepared	
1 May, 2026	
5. Available Attendance Formats	
Lecture halls, teaching labs, smart boards, and blended e-learning platforms.	
6. Number of Class Hours / Number of Units	
hours / (3) (75)units	
7. Name of Course Instructor (list all names if applicable)	
Lec.Dr. Haider Salem Lec.Dr. Rasha Hassan Abdullah	
8. Course Objectives	
Course Objectives	:Course Objectives :General Objective To familiarize students with providing immediate medical assistance and support to patients and the injured to prevent any potential consequences to their lives and health Specific Objectives: By the end of the academic year, students will be able to: 1. Perform initial diagnosis, early intervention, and resuscitation 2. Identify common conditions requiring emergency medical intervention 3. Use certain modern devices, techniques, and medications that are widely used in the practice of emergency medicine
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following:

1. Short-term planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula.
2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence.
3. Long-Term Planning: Develop an integrated educational environment based on blended learning; encourage scientific research; and collaborate with universities and international scientific institutions to modernize teaching and assessment methods in line with international standards.

10.Course Structure

Week	Hours	Expected Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 hours of theory 4 hours of practical work	Understanding the Material	Principles of Emergency Medicine	Theoretical Lecture Practical Application in the Lab	Theoretical Quizzes Practical Lab Tests
2	2 hours of theory 4 hours of practical training	Understanding the material	Airway management	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
3	2 hours of theory 4 hours of practical training	Understanding the material	Cardiopulmonary and cerebral resuscitation	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
4	2 hours of theory 4 hours of practical work	Understanding the material	4 Cardiac dysrhythmias	Theoretical lecture Practical application of the in the lab	Theoretical quizzes Practical lab tests
5	2 hours of theory 4 hours of practical work	Understanding the material	Severe sepsis and septic shock	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

6	2 hours of theory 4 hours of practical work	Understanding the Material	Shock	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
7	2 hours of theory 4 hours of practical work	Understanding the material	Traumatic injuries	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
8	2 hours of theory 4 hours of practical work	Understanding the material	Emergency medical services	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
9	2 hours of theory 4 hours of practical work	Understanding the material	Hypertensive Urgencies and Emergencies	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
10	2 hours of theory 4 hours of practical work	Understanding the Material	Seizures	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
11	2 hours of theory 4 hours of practical work	Understanding the material	Shortness of breath in adults	Theoretical lecture Practical application in the lab	Theoretical Tests (Quizzes) Practical Lab Tests
12–13	2 hours of theory 4 hours of practical work	Understanding the material	Shortness of breath in children	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests
14	2 hours of theory 4 hours of practical work	Understanding the material	Toxicological emergencies	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical Lab Tests
15	2 hours of theory 4 hours of practical work	Understanding the Material	Environmental emergencies	Theoretical lecture Practical application in the lab	Theoretical quizzes Practical lab tests

11. Course Assessment

The course is assessed according to a rigorous system that ensures a fair and balanced evaluation of students' academic achievement and skills, as follows:

- Semester Grade (40%), which includes:
 - Theoretical: 25% – through quizzes, assignments, and class participation.

- Practical: 15% – through continuous assessment of performance in the lab or practical application.
- Final Grade (60%), which includes:
 - Theoretical: 35% – through a final written exam to assess overall understanding of the material.
 - Practical: 25% – through a practical or clinical exam to assess applied proficiency.

This system is applied to both semesters to ensure consistency in assessment between theoretical and practical aspects.

12. Learning and Teaching Resources

Required textbooks (course syllabus, if available)	Tintinalli's Emergency Medicine
Primary References (Sources)	Rosen's Emergency Medicine
Recommended Supporting Books and References (Scientific Journals, Reports, etc.)	Oxford Handbook of Emergency Medicine
Electronic references, websites	All references related to internal medicine that are relevant to anesthesia and intensive care

Course Description Template

1. Course Name	
Graduation Project	
2. Course Code	
TU-ANE-426	
3. Semester / Year	
second / 2025-2026	
4. Date Prepared This Semester	
1 May, 2026	
5. Available Attendance Formats	
6. Number of Class Hours / Number of Units	
)90) / hours (4units (	
7. Name of Course Instructor (list all names if applicable)	
8. Course Objectives	
Course Objectives	The student should be able to write a research paper
9. Teaching and Learning Strategies	
Strategy	The program relies on various types of planning to achieve the course objectives through the following: 1. Short-Term Planning: Working to update course content and curricula annually to align with recent developments in science and technology, in coordination with corresponding departments, while allowing for the addition of new content not exceeding 20% of the content of compatible curricula. 2. Medium-Term Planning: Establishing academic partnerships with corresponding departments at other colleges and universities to exchange expertise on curricula and teaching methods, as well as hosting professors and organizing academic exchange visits to enhance academic excellence. 3. Long-Term Planning: Develop an integrated learning environment based on blended learning, encourage scientific research, and collaborate with international universities and scientific institutions to modernize teaching and assessment methods in line with international standards.