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

Academic Program Description Manual

٢٠٢٤

Academic Program Description Template

University Name: Uruk University

College/Institute: College of Health and Medical Technologies

Academic Department: Department of Anesthesia Techniques

Name of the Academic or Professional Program: Bachelor's Degree

Title of the Final Degree: Bachelor in Anesthesia Techniques

Study System: Annual + Semester–based

Date of Description Preparation: 15/10/2024

Date of File Completion: 15/10/2024

Signature:
Deputy Dean Academic for Affairs:
Dr. Faiza Hazem Hassan
Date: 16/6/2025

Signature:
Head of Department: Asst. Prof. Dr. Zuheir Ibrahim Hassoun
Date:

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Director of the Quality Assurance and University Performance Division:
Dr. Hussein Arrak Majeed Alzubaidi
Date: 20-5-2025
Signature:

Approval of the Dean

Introduction:

The educational program is considered a coordinated and organized package of academic courses that includes procedures and experiences structured into academic modules. The primary purpose of this structure is to build and refine the skills of graduates, making them qualified to meet labor market requirements. The program is reviewed and evaluated annually through internal or external auditing procedures and programs, such as the external examiner program.

The academic program description provides a brief summary of the main features of the program and its courses, highlighting the skills intended to be developed in students based on the program's academic goals. This description is essential as it forms the foundation for obtaining program accreditation. It is written collaboratively by the teaching staff under the supervision of the scientific committees within the academic departments.

This second edition of the guide includes an updated description of the academic program, reflecting updates to the previous guide in light of new developments in the Iraqi educational system. It covers the description of academic programs in their traditional formats (annual, semester-based) and includes the standardized تdescription format adopted under the letter of the Directorate of Studies No. ٢٩٠٦/٣م dated ٣/٥/٢٠٢٣ for programs based on the Bologna Process.

In this context, we emphasize the importance of writing accurate descriptions of academic programs and course syllabi to ensure the effective implementation of the educational process.

Concepts and Terminology:

Academic Program Description:

Provides a concise summary of the program's vision, mission, and goals, including a detailed description of the intended learning outcomes according to defined learning strategies.

Course Description:

Offers a brief summary of the key features of the course and the learning outcomes expected to be achieved by the student, indicating whether the student has made full use of the available learning opportunities. It is derived from the academic program description.

Program Vision:

An aspirational image of the future of the academic program, portraying it as innovative, inspiring, motivating, realistic, and applicable.

Program Mission:

Summarizes the goals and the activities required to achieve them, and outlines the program’s development paths and directions.

Program Goals:

Statements that describe what the academic program aims to achieve within a specified period. They must be measurable and observable.

Curriculum Structure:

All courses/subjects included in the academic program, according to the adopted learning system (semester-based, annual, Bologna Process), whether 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 after successfully completing the academic program. Each course should have clearly defined learning outcomes that contribute to achieving the program’s goals.

Teaching and Learning Strategies:

The strategies used by faculty members to enhance student learning. These are planned methods followed to achieve learning goals and describe all in-class and extracurricular activities designed to accomplish the program's learning outcomes.

١. Program Vision
The department aims to supply various healthcare institutions with specialized medical personnel to address the current and future shortage in the field of anesthesia.

٢. Program Mission
To provide a stimulating technical educational and research environment that promotes learning and creativity, contributes to preparing highly competent graduates, achieves effective local and international academic collaboration, and strengthens partnerships with various community sectors.

٣. Program Objectives
The department aims to prepare highly skilled healthcare personnel specialized in anesthesia techniques to work in healthcare institutions. Upon graduation, students will be able to: ١. Prepare the patient before surgery in the operating room. ٢. Administer appropriate anesthesia doses to the patient. ٣. Operate and maintain anesthesia devices and equipment. ٤. Handle anesthetic substances used for patient sedation.

١. Program Accreditation
A detailed study has been submitted to obtain accreditation, including the self-assessment report, the improvement plan, and the compliance report.

٢. Other External Influences
Laboratories, library, hospitals, internet.

١. Program Structure				
Program Structure	Number of Courses	Credit Units	Percentage	*Notes
Institution Requirements	٤٧	١٩١	% ١٠٠	
College Requirements	٢٣			
Department Requirements	٤٧	١٩١	٪١٠٠	
Summer Training	٢	Fulfilled	٪١٠٠	
Others				

* Notes may include whether the course is mandatory or elective.

١. Program Description				
Year / Level	Course Code	Course Title	Credit Hours	
First Year / First Semester			Theoretical	Practical
First Semester	MEP١٧١٠١	Medical Physics (١)	٢	٤
First Semester	ANA١٧١٠١	Anatomy (١)	٢	٤
First Semester	GEP١٧١٠١	General Physiology (١)	٢	٤
First Semester	GEC١٧١٠١	General Chemistry	٢	٤
First Semester	BIO١٧١٠١	Biology	٢	٤
First Semester	COP١٧١٠١	Computer Fundamentals (١)	١	٢
First Semester	HUR١٧١٠١	Human Rights and Democracy	٣	–
First Semester	ENG١٧١٠١	English Language	٢	–
First Year / Second	MEP١٧١٠٢	Medical Physics (٢)	٢	٤

Semester				
Second Semester	ANA١٧١٠٢	Anatomy (٢)	٢	٤
Second Semester	GEP١٧١٠٢	General Physiology (٢)	٢	٤
Second Semester	BIC١٧١٠٢	Biochemistry	٢	٤
Second Semester	MIC١٧١٠٢	Microbiology	٢	٤
Second Semester	COP١٧١٠٢	Computer Fundamentals (٢)	١	٢
Second Semester	ARL١٧١٠٢	Arabic Language	٢	–
Second Year / First Semester	BAN١٧٢٠١	Fundamentals of Anesthesia (١)	٢	٤
	BAE١٧٢٠١	Fundamentals of Anesthesia Equipment (١)	٢	٤
	APH١٧٢٠١	Applied Physiology (١)	٢	٤
	BOS١٧٢٠١	Fundamentals of Surgery (١)	١	٤
	BOM١٧٢٠١	Fundamentals of Internal Medicine (١)	٢	٤
	PHA١٧٢٠١	Pharmacology (١)	٢	٢
	MET١٧٢٠١	Medical Terminology	٢	–
	CRB١٧٢٠١	Crimes of the Ba'ath Regime in Iraq	٢	–
Second Year / Second Semester	BOA١٧٢٠٢	Fundamentals of Anesthesia (٢)	٢	٤
	BAE١٧٢٠٢	Fundamentals of Anesthesia Equipment (٢)	٢	٤
	APH١٧٢٠٢	Applied Physiology (٢)	٢	٤
	BOS١٧٢٠٢	Fundamentals of Surgery (٢)	١	٤
	BOM١٧٢٠٢	Fundamentals of Internal Medicine (٢)	٢	٤
	PHA١٧٢٠٢	Pharmacology (٢)	٢	٢
	STA١٧٢٠٢	Statistics	١	٢
	ARL١٧٢٠٢	Arabic Language	٢	–
Third Year / First Semester	ANE١٧٣٠٠	Anesthesia (١)	٢	٥
	ICU١٧٣٠٠	Intensive Care Techniques (١)	٢	٤
	AET١٧٣٠٠	Anesthesia Equipment Techniques (١)	٢	٤
	MED١٧٣٠٠	Internal Medicine (١)	٢	٤
	SUR١٧٣٠٠	Surgery (٢)	١	٣

	COM١٧٣٠٠	Computer Applications (٢)	١	٢
	SUM١٧٣٠٠	Summer Training	٠	–
Third Year / Second Semester		Anesthesia (٢)	٢	٥
		Fundamentals of Intensive Care (٢)	٢	٤
		Anesthesia Equipment Techniques (٢)	٢	٤
		Internal Medicine (٢)	٢	٤
		Surgery (٢)	١	٣
		Computer Applications (٢)	١	٢
Fourth Year / Full Year	ANE١٧٤٠٠	Anesthesia (٣)	٢	٤
	AET١٧٤٠٠	Anesthesia Equipment Techniques (٣)	٢	٤
	ICU١٧٤٠٠	Intensive Care Techniques (٢)	٢	٤
	MES١٧٤٠٠	Surgical Internal Medicine	١	٤
	NUR١٧٤٠٠	Nursing	١	٤
	RES١٧٤٠٠	Graduation Project	–	–
	PET١٧٤٠٠	Professional Ethics	١	–
	ENG١٧٤٠٠	English Language	١	–

١. Expected Learning Outcomes of the Program

Knowledge

١. Preparing specialized personnel in anesthesia techniques.

٢. Managing operating rooms and intensive care units in both public and private hospitals.

Skills

١. The student should use tools correctly.

٢.The student should apply what they have learned in practice.

٣.The student should prepare the necessary materials.

٤.The student should perform appropriate procedures in response to various

cases.

٥.Solid understanding of the principles of anesthesiology and related sciences.

٦.Technical proficiency in the field, including monitoring vital signs during anesthesia.

٧.Good command of medical terminology.

٨. Good proficiency in the English language.

Values

١. Working with a team spirit.

٢. Understanding the importance of academic subjects.

٣. Commitment to the ethics of the academic institution.

٤. Receptiveness to information and cognitive engagement. .

١. Teaching and Learning Strategies

Blended learning, which consists of in-person education—including smart classrooms and specialized educational laboratories according to the scientific subjects—along with electronic communication with students for assigning tasks and providing instructions.

٢. Assessment Methods

Examinations, reports, discussions, attendance, daily quizzes, and student activities.

١.Teaching Staff

Faculty Members

Academic Rank	Specialization	Requirements / Specific	Number of Faculty Members

			Skills (if any)			
	Public	**Private**			**Permanent Staff**	**Lecturer / Adjunct**
Prof. Dr. Ali Al-Shahham	Medicine	Board in Surgery	Dean		Yes	
Asst. Prof. Dr. Faiza Hazem	Chemistry Sciences	Cosmetic (Medicine/Surgery)	Assistant Dean for Scientific Affairs		Yes	
Asst. Prof. Dr. Hajar Kazem Shahad	Medicine	Chemistry	Assistant Dean for Administrative Affairs		Yes	
Asst. Prof. Dr. Zuheir Ibrahim Hassoun	Veterinary Medicine	Inorganic (Chemistry)	Head of Anesthesia Department		Yes	
Lect. Asst. Awad Mohammed Awad	Biology	Board	Department Rapporteur		Yes	
Zeinab Abdulkhaliq Taha	Veterinary Medicine	Surgery	Department Rapporteur		Yes	
Prof. Dr. Duraid Abdulhadi	Medicine	Diploma in Genetic Engineering and Biotechnological Techniques	Lecturer		Yes	
	Biology	Toxicology	Lecturer		Yes	Yes
Asst. Prof. Dr. Ahmed Saadoun	Medicine	Board in Anesthesiology	Lecturer		Yes	
Asst. Prof. Dr. Hala Mohammed Jawad	Medicine	Molecular Science	Lecturer			Yes
Asst. Prof. Dr. Tamara Fares Abdulnour	Veterinary Medicine	Board in Anesthesiology	Lecturer			Yes
Prof. Dr. Raad Hammoudi	Veterinary Medicine	Board in Anesthesiology	Lecturer		Yes	
Asst. Prof. Dr.	Nursing	Physiology	Lecturer		Yes	

Saad Talib						
Asst. Prof. Dr. Ahmed Ajlan	Medicine	Anatomy	Lecturer		Yes	
Prof. Dr. Azhar Subaih	Medicine	Adult Nursing	Lecturer		Yes	
Asst. Prof. Dr. Mohammed Barisam	Medicine	Board in Internal Medicine	Lecturer		Yes	

Professional Development
Guidance for New Faculty Members:
-Commitment to official working hours. -Adherence to the scheduled times for lectures, exams, and the overall educational process. -Encouragement to conduct scientific research. -Monitoring the progress and completion rate of lectures. -Conducting self-assessment evaluations.
Professional Development for Faculty Members:
-Engaging in various scientific activities (seminars, courses, discussion panels, etc.). -Participation in scientific conferences. -Participation in continuing education scientific activities.

١. Admission Criteria
Centralized admission according to the regulations of the Ministry of Higher Education and Scientific Research.

٢. Main Sources of Information about the Program
• Faculty staff • Lecturers' presentations • College library • Electronic library • Textbooks • Supplementary books • Website and internet

. Program Development Plan
Develop and establish specialized scientific laboratories to enable students to engage with the latest modern technologies.

Program Skills Map															
				Intended Learning Outcomes of the Program											
Year / Level	Course Code	Course Title	Core or Elective	Knowledge				Skills				Values			
				١A	٢A	٣A	٤A	١B	٢B	٣B	٤B	١J	٢J	٣J	٤J
First Year / Semester 1 + Semester 2	MEP17101	Medical Physics ١	Core	√	√	√	√	√	√	√	√	√	√	√	√
	ANA17101	Anatomy ١	Core	√	√	√	√	√	√	√	√	√	√	√	√
	GEP17101	General Physiology ١	Core	√	√	√	√	√	√	√	√	√	√	√	√
	GEC17101	General Chemistry	Core	√	√	√	√	√	√	√	√	√	√	√	√
	BIO17101	Biology	Core	√	√	√	√	√	√	√	√	√	√	√	√
	COP17101	Computer Fundamentals ١	Core	√	√	√	√	√	√	√	√	√	√	√	√
	HUR17101	Human Rights and Democracy	Core	√	√	√	√	√	√	√	√	√	√	√	√
	ENG17101	English Language	Core	√	√	√	√	√	√	√	√	√	√	√	√
	MEP17102	Medical Physics ٢	Core	√	√	√	√	√	√	√	√	√	√	√	√

	ANA17102	Anatomy ٢	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	GEP17102	General Physiology ٢	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	BIC17102	Biochemistry	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	MIC17102	Microbiology	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	COP17102	Computer Fundamentals ٢	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	ARL17102	Arabic Language	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	BAN17201	Fundamentals of Anesthesia (١)	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	BAE17201	Fundamentals of Anesthesia Equipment (١)	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	APH17201	Applied Physiology (١)	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	BOS17201	Fundamentals of Surgery (١)	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	BOM17201	Fundamentals of Internal Medicine (١)	**Core**	√	√	√	√	√	√	√	√	√	√	√	√

	PHA17201	Pharmacology (١)	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	MET17201	Medical Terminology	**Core**	√	√	√	√	√	√	√	√	√	√	√	√
	CRB17201	Crimes of the Ba'ath Regime in Iraq	**Core**	√	√	√	√	√	√	√	√	√	√	√	√

Please place a checkmark in the boxes corresponding to the individual program learning outcomes being assessed.

Course Description Template

١. Course Title
Anesthesia Techniques
٢. Course Code
٣. Semester / Year
First Semester – Second Semester / First Year First Semester – Second Semester / Second Year First Semester – Second Semester / Third Year First Semester – Second Semester / Fourth Year
٤.Date of Description Preparation:
٧/٥/٢٠٢٥
٥. Available Attendance Mode:
Person
٦. Total Study Hours: ١٦٦ / **Total Credit Units:** ١٩١
٧.Course Coordinator(s) [Name(s) to be listed if more than one]

me: ıail	
٨. Course Objectives	
Course Objectives	Preparing the patient before surgery in the operating room Administering the appropriate doses of anesthesia to the patient. Operating and maintaining anesthesia devices and equipment Handling anesthetic substances used for patient sedation.
١. Teaching and Learning Strategies	
٢ategy:	Using lectures to communicate with students, along with PowerPoint slides, whiteboards, specialized educational laboratories, and short scientific video clips.
١.Course Structure	

Week	ours	Intended Learning Outcomes	Unit or Topic Title	Teaching Method	

Week 1 – Week 15	Irs.	*Physics of skeleton, pressure. *Energy, work and power of the body. *Heat and cold in medicine *Specific heat, heat capacity, latent heat, thermometer and it's kinds, heat transfer b conduction, convecti and radiation. Regulation of heat through the human body. *Boyle's law, diffusio and mixing of gases. *Physics of lung and breathing. *Evaporation of	Medical physic	Lectures Theory + Practical	Midterm Exams, Daily Quizzes and Oral Questions

		liquids, vapour pressure and boiling point, humidi laminar and trubular flow in liquid.			
Week 1 – Week 15	rs.	* Introduction, Anatomical terms *Body cavities and its organs. *Superficial anatomy of human body. *Human body tissues types and characteristic . *Skin anatomy and it functions skin color . *General skeletal stricture (Skull, and neck). *Vertebral column stricture, numbers ar its function. *Diaphragm and abdominal wall muscles.	Anatomy	Lectures Theory + Practical	Midterm Exams, Daily Quizzes and Oral Questions

		*Anatomy of heart, wall, valve and its function *Structure of blood vessels wall arteries, veins and capillaries. *Lymphatic system – lymph glands. *Respiratory system upper respiratory tract. *Respiratory system- lover respiratory trac *Alveoli- lungs- pleu activity. *Upper and loer Liml			
Week 1 - Week 15	rs.	*Definition of physiology; cell physiology; cell membrane components and structure. *Movement of fluid, solutes and gas	General physiology (1	Lectures Theory + Practical	Midterm Exams, Daily Quizzes

		across the cell membrane. *Muscular system : types & characteristi *Contraction mechanism, fatigue, muscular pain *Types of nerve cells functions of nerve impulse, synapses an reflexes *Action potential of nerve and muscle fib *Blood; functions, component, plasma and serum *Red blood cells, sha origin, Hb structure and Anemia *W.B.Cs, platelets ; functions, origin, structure *Blood clotting mechanism			and Oral Que stio ns

		*Cardiovascular system ,heart valve cycle, HR conductive system. *Heart sounds and murmers, ECG *Blood pressure *Respiratory system, Pleura , Types of mechanism of respiration. *Oxygen Transportin and exchange Carbon dioxide transporting and exchange ,Lung Vol. and capacity, types o Hypoxia			
Week 1 -rs. Week 15		*Scope of biochemist in health and disease cell and cell constituents. *Some aspects of physical chemistry, G	General Chemistry	Lectures Theory + Practical	Midt erm Exa ms, Dail y

		laws, Boyle's law, Graham's Law of diffusion, Dalton's La of partial pressure, General gas equation the international system of units. *Radio activity and radioactive isotopes. *Solutions and methods of expressin concentrations colloidal solution. *The PH concept, Aci base balance, chemic equilibrium, commor ion effect. *Buffer and buffer systems of physiolog importance in living systems. *Blood, blood constituents, body fluids, regulation of blood Ph and body			Quiz zes and Oral Que stio ns

		fluids. *Water and electroly balance – osmotic pressure of body fluids, contro of total electrolytes a body fluids. *Carbohydrates classification reactio main carbohydrates i human body. *Metabolism of carbohydrates, blood glucose factors controlling glucose level in blooc *Glucose abnormalities, diabet mellitus, ketosis, glycosuria, glucose tolerance curve. *Lipids, classificatio derived lipids, compound, lipids. *Lipid metabolism,			

		lipid abnormalities. *Proteins, classification, functions, peptide bonds, amino acids, chemical reactions *Nucleic acids and their Expression, DNA Replication, Nutation RNA Topology.			
Week 1 – Week 15	rs.	*Introduction to biology, the cells, prokaryotic and eukaryotic cells, anim and plant cell *The Structure of cell types , shape and size *Movement in and ou of cells: diffusion , osmosis , active transport. *Cell division: Amitosis, Mitosis and Meiosis	Biology	Lectures Theory + Practical	Midterm Exams, Daily Quizzes and Oral Questions

		*Nucleic acid: DNA a RNA, DNA Replicatio *Protein Biosynthesi *Human body tissues Epithelial tissues *Muscular and Nervous tissues *Connective tissues: Bone and cartilage *Blood (R.B.C and WBC) and lymph			
Week 1 – Week 15	rs.	arantees for the spect and Protection Human Rights At the national and international levels: • Constitutions and lav • Freedom of the press and public opinion • Civil society organizations • Regional organizatio (e.g., the Arab League	Human Rights and Democracy	Lectu Theo	Midt erm Exa ms, Dail y Quiz zes and Oral Que stio ns

		the European Union, the Organization of American States) • The United Nations a its specialized agenci			
		neral Concept of vareness • Means of achieving awareness • Dimensions of water awareness • Uses of water awareness			
		ater and vironmental vareness in Iraq • Challenges facing water awareness • Proposed measures t solve the freshwater shortage crisis			
		The Concept of			

		Equality • The historical development of the concept of equality • The modern development of the idea of equality • Gender equality • Equality among individuals regardles of their beliefs			
Week 1 – Week 15	rs.	**mputer ndamentals** • **Concept of Computers & Life Cycle Stages** The concept of the computer and the stages of the compute life cycle • Evolution of Compute Generations • Advantages and Applications of	Principles of Computer 1	Lectures Theory + Practical	Midt erm Exa ms, Dail y Quiz zes and Oral Que stio ns

		Computers
		Benefits of using computers and fields application
		• Classification of Computers
		Based on purpose, siz and data type
		
		Computer Componen
		• Computer Componen
		  ○ Hardware components
		  ○ Software components			

		ur Personal mputer • The concept of **computer security** and **software licens**			
		mputer Safety & ftware Licenses • Ethics in the digital			

		world
		• Types of violations
		• Computer security
		• Computer privacy
		• **Software Licenses and Types**
		  ○ Intellectual property
		  ○ Cyber intrusion
		  ○ Malware
		  ○ Key steps for protection against hacking
		  ○ Health risks associated with computer use
		
		Operating Systems
		• Definition, Functions Objectives, and Classification
		• Examples of operating systems
		• **Windows 7 Operating System**			

		○ Desktop components ○ Start menu ○ Taskbar **lders and Files** • Icons • Operations on windows • Desktop backgrounds **ntrol Panel** • Windows Control Pa categories • Defragmentation • File organization • Installing and uninstalling software **mmon Computer ttings and intenance** • Printer management • Adjusting time and date			

		• Disk maintenance			
Week 1 – Week 15	rs.	*Cardinal Numbers/years/pric /times (in words and figures).Phonetic of alphabet letters, Punctuation.Countrie /Capitals, arrange words (makes full sentence)/ arrange letters (make full word). *Question words (what, where, when, who, why, how, whom, whose, which).Abbreviation (short form), adjectiv (and their opposite). *Simple present, Simple past, Present continuous. *Possession (all	English Langua	Lectures Theory	Midt erm Exa ms, Dail y Quiz zes and Oral Que stio ns

		types).Pronunciation s at the end of a word).Pronouns (all types). *Medical terminology Language of medicin Medical terms *Spelling of medical terms Pronunciation medical terms *Suffixes, Prefixes, ro *Body structure Plan of the body *Orientation and directional terms Bo positions *Body cavities			
Week 1 – Week 15	rs	*History of anesthesi and introduction + scope of anesthesiology. *Choice of anesthetic technique	Basics of Anesthesia(	Lectures Theory + Practical	Midterm Exams, Daily activ

		*Preanesthetic visit and assessment *Premedication aims and therapeutic management *General pharmacology *Inhalational anesthetic agents (in details) *Intravenous an aesthetic agents (in details) *Muscle relaxants (in details) & reversal			ities
Week 1 – Week 15	rs.	*electrical componen and activity of the Heart *the cardiac action potential in ventricul muscle and pacemak tissues *contractile	Applied Physiology (1	Lectures Theory + Practical	Midt erm Exa ms, Dail y Quiz zes

		cardiomyocytes and excitation contractio Coupling *ECG and Arrhythmi *cardiac cycle *heart sound and waveforms generate during cardiac Cycle *the left ventricle pressure-volume Loo *cardiac innervation and control of heart rate *cardiac reflexes *systemic Circulatio *blood pressure regulation *physiology of microcirculation(sta ng law of capillary) *venous circulation and venous return *coronary circulatio *spirometery and lu volumes			and Oral Que stio ns

Week 1- week 15	ırs.	*metabolic response injury *inflammation acute chronic *shock & type path physiology *wounds , tissue repa & scar *Surgical infection *Patient safety *Preoperative care & care in operation *Head injury, management of unconscious patient *Abscess , cellulites , carbuncle & nonspecific infection *Gangrene , type & causes *Fluid therapy *Nutritional Support surgery *Acid – base balance *Spinal injury	Basics of Surgc (1)	ctures eory + Practical	Midt erm Exa ms, and Dail y Quiz zes

		peripheral nerve inju *Principles of laparoscopic surgery			
Week 1 – Week 15	rs.	*Diseases due to infection/ concepts o infection major manifestations /methods of diagnos bacteremia/ septicemia / princip of management. *Diseases of the respiratory system- Introduction *Major manifestatio / investigations/ res function tests. *Diseases of the C.V.S introduction/ major manifestation investigations. *Principles of electrocardiography/ normal ECG/S.	Basics of Medicine (1)	Lectures Theory + Practical	Midterm Exams, and Daily Quizzes

		Tachycardia/ S. Bradycardia/ S. arrhythmia. *AIDS *Diseases of the GIT/ Introduction/ major manifestation/ investigations. *Diseases of the liver introduction/ Bilirub metabolism/ major manifestations / investigations. *Diseases of the kidn / introduction major manifestations / investigations.			
Week 1 – Week 15	rs.	*Principles of Drug Therapy. Pharmacokinetics. Absorption, distribution, metabolism and excretion of the drug	Pharmacology (1)	Lectures Theory + Practical	Midterm Exams, Daily Quiz

		Pharmacodynamics. Drug-receptors interaction. Efficacy, potency, agonists, antagonists *Cholinergic agonists and antagonists *Adrenergic agonists and adrenergic antagonists *Drugs affecting cardiovascular syster -Antihypertensive drugs. - Heart Failure *Drugs affecting cardiovascular syster -Anti-arrhythmic. - Antianginal drugs *Diuretics *Antihistamines *Drugs for Disorders the Respiratory System *Drugs for anemia			zes and repo rts

		*Anticoagulants and Antiplatelet Agents *Skeletal muscle relaxants. *Local anesthetics *General anesthetics			
Week 1 – Week 15	ırs.	*Introduction– structural analysis- Basic rules of medica word building. *Major suffixes- suffixes denoting a state or condition. *Major suffixes- suffixes denoting medical actions. *Prefixes- prefixes of No.& measures. *Prefixes- prefixes of color. *Prefixes- prefixes of direction & position. *Prefixes- prefixes of	Medical terminology	Lectures Theory	Midterm Exams, and Daily Quizzes

		size, time & place. *Prefixes- prefixes of negation. Prefixes- prefixes of type. *Roots. Word terminals. Conditions. The body as a whole. *Skin & its appendages. Gastrointestinal Trac *Respiratory system. Cardiovascular Syste *Blood & lymphatic system *Musculoskeletal system *Urogenital system. *Endocrine system. *Nervous system. *Special senses. *Oncology. *Speciality related termes.			

Week 1 ırs. Week 15		*Operating room design and functionir *Cannula and giving set and device for intravenous infusion *Physical principles: behavior of molecule of solid and liquid, he and temperature Physical principles: properties of gases, temperature, and flov of fluid through tube: and orifice *Endotracheal tube (ordinary tube) , laryngoscope, airway (oropharyngeal and nasopharyngeal), tracheostomy, Facemask *Breathing system ar their component, definition,	Basics Anesthe equipment (1)	Lectures Theory + Practical	Midt erm Exa ms, Dail y Quiz zes and Oral Que stio ns

		classification, workin principle			
Week 1 – Week 15	rs.	*Preoperative assessment (evaluation) & risk evaluation + optimization *Preoperative preparation for elective surgery. *Maternal anatomica and physiological changes *Anesthesia for obstetrics & gynecology. *Pediatric anatomica and physiological changes *Anesthesia for pGeriatric anatomica and physiological changes ediatric patients. *Geriatric anatomical	Anesthesia (	Lectures Theory + Practical	Midt erm Exa ms, Dail y Quiz zes and Oral Que stio ns

		and physiological changes *Anesthesia for geriatric patients. *Anesthesia for obes patients *Anesthesia for thoracic surgery. *Anesthesia for Neurosurgery *Anesthesia for ENT			
Week 1 – Week 15	rs.	• ICU organization, design, equipment • Indication for ICU an mechanical ventilatic • clinical monitoring in ICU (respiratory monitoring, cardiovascular monitoring, hemodynamic and cranial monitoring) • Hypoxia and oxygen therapy	sics of Intensi Care (	Lectures Theory + Practical	Midterm Exams, Daily Quizzes and Oral Questions

		• thromboembolism prophylaxis • HFNC, Noninvasive ventilation indicatior modes • Invasive mechanical ventilation (modes o ventilation, waves) • sedation and analges in the ICU • Ventilator-Associate Pneumonia • Pneumothorax, hemothorax, tension pneumothorax, stres ulcer • weaning			
Week 1 – Week 15	rs.	• Jaundice: classificatic causes, clinical features, diagnosis. • Peptic ulcer disease : Duodenal ulcer, Gastric ulcer • Cerbrovascular	Medicine (	Lectures Theory + Practical	Midt erm Exa ms, Dail y Quiz

		accident • Renal failure: acute renal failure, chronic renal failure: clinical features, • investigations and treatment. • Ischemic heart diseases: clinical features, diagnosis, treatment. • Arrhythmias: cardiac arrest. • Heart failure: definition, classification, causes, precipitating factors, • investigations, treatment. • Hypertension: definition, types: primary and seconda hypertension. • complications,			zes and Oral Questions

		investigations/ treatment. • Infections of the respiratory tract: upper respiratory tra infections. • Lower respiratory tra infections: pneumoni			
Week 1 – Week 15	rs	• Digestive Tract (GIT) General Review & Surgical Approaches • Salivary glands • Investigation & Diagnosis (Diagnosis Image) endoscopy & tissue Diagnosis • Oesophagus • Stomach & duodenur • Liver • Gall bladder & bile ducts • Spleen & pancreas • Small & large intestir • Intestinal obstructior	Surgery (1)	Lectures Theory + Practical	Midterm Exams, Daily Quizzes and Oral Questions

		& fistula • Vermiform appendix peritoneum • Rectum & anus • Abdominal wall & Hernia • Breast • Burn, plastic surgery			
Week 1 – Week 15	rs.	• Airway management device: supra glottis device, laryngeal mask all types, i-gel ,cobra airway, Combe tube …etc • Endotracheal tubes f special purpose, doul lumen tube • Laryngoscope modification, aids to intubation, emergenc Airway • Humidifier and nebulizer: definition, importance of	Anesthetic Equipment Technology (2)	Lectures Theory + Practical	Midt erm Exa ms, Dail y Quiz zes and Oral Que stio ns

		humidification Classification and examples of humidifi and nebulizer • Medical suction apparatus, componer choice, standard and testing			
Week 1 – Week 15	rs.	• anesthesia for emergency operation • Endotracheal intubation-difficult intubation + difficult intubation management guidelines. • Emergency Airway Management of traur patient / failed intubation drill • Anesthetic Management of patie with ischemic heart disease undergoing	Advance Anesthesia (1)	Lectures Theory + Practical	Midt erm Exa ms, Dail y Quiz zes and Oral Que stio ns

		non-cardiac surgery. • Anesthetic Management of patie with valvular heart disease • Anesthetic Management of patie with heart failure/ Anesthetic Management of patie with cardiomyopathy • Anesthetic Management of patie with Asthma, COPD and Restrictive Pulmonary Disease • Perioperative Management of patie with Aspiration Pneumonia/ Pulmonary Embolism • Hematological Diseas and Anesthesia • Electro-compulsive			

		therapy (ECT) and anaesthesia • Anesthetic Management for Thyroidectomy/ Explorative Laparotomy • Anesthetic & Diabete mellitus			
Week 1 – Week 15	rs.	• pulmonary embolism and pulmonary edem • acute renal failure an CRRT • sepsis and septic sho • multiple trauma (sev multiple trauma, ches injury, spinal cord injury) • environment injuries (submersion, burns, thermal injury and envenom enation) • infection and antimicrobial therapy	Intensive Care Technology (1)	Lectures Theory + Practical	Midterm Exams, Daily Quizzes and Oral Questions

		• ICU care after cardiac surgery • transport of critically ill patients • Nutrition in ICU			
Week 1 – Week 15	rs.	• Shock (types, patho physiology, management) • Organization and function and immune system • Genetics and disease • Type &genetics disea • Principle & critical ca medicine • Autoimmune disease • Ophthalmic disease • Principle of general medicine • Disease of the nerve and muscle • Disorder of spin and spinal cord • Heavy metal poisonir	vance Medici (	Lectures Theory + Practical	Midterm Exams, Daily Quizzes and Oral Questions

		• Disease of blood • Infection of nervous system • Endocrinology: Pituitary gland • Thyroid gland			
Week 1 -rs. Week 15		• Physiological monitoring: principle monitoring, classification of monitoring equipmer invasive (Doppler) Monitoring of blood pressure, invasive (CVP) and non-invasive (arterial blo pressure) pulse oximeter E.T CO2 EC(and temperature monitoring equipmer • Monitoring for gases, inspired O2 concentration, nitrou	Anesthetic Equipment Technology (3)	Lectures Theory + Practical	Midterm Exams, Daily Quizzes and Oral Questions

		oxide and volatile anaesthetic agent concentration analyz • measurement of gase in blood (blood gas analyzer) • Measurement of respiratory volume(wright respirometer) , Measurements of volume, flow and pressure, force and pressure • Electrical hazard and their prevention, and accident associated with main electrical supply Risk management: principles of risk management, risk reduction related to equipment ,Surgical diathermy, accident			

		due to use of diathermy • Hemofiltration			
Week 1 Week 15	rs.	**Unit One – Ethics** The concept and origin of ethics General rules of ethics Sources of ethics Ethical values The importance of ethics for the individual and society **Unit Two – Work and Profession** Work and its importance Work behavior The concept of profession Definition of profession The difference between the concepts of work, profession,	Professional Ethics	Lectu Theo	Midt erm Exa ms, Dail y Quiz zes and Oral Que stio ns

		and craft **Standards on Which the Profession Should Be Based** **Unit Three – Professional Ethics** The essence of professional ethics Positive outcomes of adhering to professional ethics Characteristics of professional ethics Traits of professional ethics Steps toward an acceptable level of professional ethics **Unit Four – Values and Professional Ethics**			

		Integrity Honesty Sincerity Justice Good conduct Work proficiency **Unit Five – Unethical Behavior Patterns in the Profession** Administrative corruption Unethical administrative behavior Definition of administrative corruption Types of administrative corruption Bribery The concept of bribery			

		Types of bribery The difference between a gift and a bribe Reasons and motives behind bribery Fraud The concept of fraud The nature of fraud at work Manifestations of fraud in job performance **Unit Six – Tools and Methods for Instilling the Values of Professional Ethics** Methods for instilling professional ethics Levels of building and establishing			

		professional ethics Tools and methods to instill professional ethics Key considerations in drafting a professional code of ethics How to promote ethical behavior at work according to (Kreitner and Kinicki) **Unit Nine – Ethics of Practicing Medical Professions** *(Specifically for the College of Health and Medical Technology)* Characteristics and traits of the medical technologist Duties of the medical			

		technologist toward their profession, the patient, and society Patient rights Justice and equality Maintaining the confidentiality of patient information Respecting patient privacy Informed consent Comprehensive care Putting the patient's interest above all else Communication with patients The right to access medical records			

١. Course Assessment
Grade distribution out of 100 is based on the tasks assigned to the student, such as daily preparation, quizzes, oral and monthly exams, written exams, reports, etc.
٢. Learning and Teaching Resources

Required Textbooks (Prescribed curriculum, if any)	
Main References (Sources)	*Fundamental of an aesthesia, fourth edition, Ted Lin, Tim Smith, and Colin Pinnock *Lecture note on clinical an aesthesia, 2nd edition CARL GWINNUTT, 2004 *Clinical anesthesiology, fifth edition , Morgan & Mikhail's, 2013 *. Clinical anesthesia, eighth edition, Paul G. Barash, MD et al. 2017 *Pharmacology and physiology for anesthesia, foundation and clinical application, 2nd edition, Hugh C. Hemmings, Jr., MD, PhD, FRCA, 2013 *Pharmacology and physiology in anesthetic practice, fifth edition, Pamela Flood, MD, MA, 2015 *Basic surgical technique, Fiona Myint, seventh edition *Text book of surgery , COURTNEY M. TOWNSEND, JR., MD, 21 edition, ٢٠٢٢ *Oxford hand book of clinical medicine, sixth edition, Longmore, Murray,2004 *Harrisons principle of internal medicine 2th edition 2018

	*Essentials of Medical Pharmacology Seventh Edition KD TRIPATHI MD Ex-Director-Professor and Head of Pharmacology, 2013 *. MEDICAL PHARMACOLOGY& THERAPEUTICS Fifth Edition, Derek G. Waller BSc (HONS), DM, MBBS (HONS), FRCP University of Southampton, Southampton, United Kingdom *Anesthesia equipment, principle and application, Jan Ehrenwerth, MD, 2nd edition *The MGH Textbook of Anesthetic Equipment, Warren S. Sandberg, MD, PhD 2nd edition
□ Recommended Supporting Books and References **(scientific journals, reports, etc.)**	Reports prepared by students during the study period, including case observations and clinical cases in hospitals.
Electronic References and Internet Websites	

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